Klamath County Emergency Medical Services

Standing Orders

Klamath County Emergency Medical Services Standing Orders

ACKNOWLEDGMENTS

Permission to use these Standing Orders has been granted by Klamath County Emergency Medical Services.

MEMO REGARDING STANDING ORDER PROTOCOLS

This memorandum provides the authority for the Emergency Medical Responders (EMRs), Emergency Medical Technicians (EMTs), Paramedics and Registered Nurses (RNs) employed by or providing volunteer services with the following Klamath County EMS Agencies only, to function under their appropriate scope of practice and the written standing orders contained herein:

Bonanza Ambulance Chiloquin Fire & Rescue Keno Rural Fire Protection District Kingsley Field Fire Department Klamath County Fire District No. 1

These written protocols operate on the principle that the EMRs, EMTs, Paramedics and RNs assume considerable latitude in the decisions regarding assessment and treatment of patients at the scene and during transport. The success of these protocols depends on the training, continuing education, clinical judgment, and personal integrity of all who provide medical services under this agreement.

These protocols shall be in effect April 1, 2022. These protocols supersede and make void any and all protocols written and approved prior to this date. These protocols will remain in effect until revised, amended or revoked; the initial physician's signature below should be no more than 12 months old.

Jake Freid

04/01/2022 Date

Supervising Physician

Table of Contents

SECTION A	7
Role and Responsibility of Supervising Physician	8
Personal Protection from Infection Control	9
Standard of Care for Klamath County EMS Personnel	9
Scope of Practice	10
Scene Authority	10
Medical Control	12
Patient Non-Transport Protocols - Refusal of Treatment	15
Death in the Field	17
Evaluate, Treat, and Refer	21
Guidelines for Transporting ALS and BLS	22
Documentation and Medical Record Requirements	24
Equipment and Supplies	25
Time on Scene	25
Ambulance Response	26
Continuous Quality Improvement Plan	26
Continuing Education and Conference Standards	27
Standing Order Review and Revision	28
Inter-hospital Transfer Protocol	28
Use of Helicopter for Patient Transports	30
Equipment List for a Non-Transporting EMS Unit	31
Klamath County Radio Frequencies	32
Klamath County EMS Approved Abbreviations	32
Klamath County Quality Assessment/Improvement Review Forms	35
SECTION B	40
Abdominal Pain	
Abdominal Pain	
Abdominal Pain Abdominal Trauma Acute Dystonic Reaction	41 42 43
Abdominal Pain Abdominal Trauma Acute Dystonic Reaction Altered Mental Status and Psychiatric Disorders	41 42 43 44
Abdominal Pain Abdominal Trauma Acute Dystonic Reaction Altered Mental Status and Psychiatric Disorders Amputation/Laceration/Soft Tissue Injury	41 42 43 44 45
Abdominal Pain Abdominal Trauma Acute Dystonic Reaction Altered Mental Status and Psychiatric Disorders Amputation/Laceration/Soft Tissue Injury Anaphylaxis	41 42 43 43 44 45 46
Abdominal Pain Abdominal Trauma Acute Dystonic Reaction Altered Mental Status and Psychiatric Disorders Amputation/Laceration/Soft Tissue Injury Anaphylaxis Barotrauma - Decompression Sickness and Arterial Gas Embolism	41 42 43 43 44 45 46 47
Abdominal Pain Abdominal Trauma Acute Dystonic Reaction Altered Mental Status and Psychiatric Disorders Amputation/Laceration/Soft Tissue Injury Anaphylaxis Barotrauma - Decompression Sickness and Arterial Gas Embolism Burns	41 42 43 44 45 46 47 48
Abdominal Pain Abdominal Trauma Acute Dystonic Reaction Altered Mental Status and Psychiatric Disorders Amputation/Laceration/Soft Tissue Injury Anaphylaxis Barotrauma - Decompression Sickness and Arterial Gas Embolism Burns Cardiac- Chest Pain	41 42 43 43 44 45 46 46 47 48 50
Abdominal Pain Abdominal Trauma Acute Dystonic Reaction Altered Mental Status and Psychiatric Disorders Amputation/Laceration/Soft Tissue Injury Anaphylaxis Barotrauma - Decompression Sickness and Arterial Gas Embolism Burns Cardiac- Chest Pain Cardiac- ST Elevation MI (STEMI)	41 42 43 43 44 45 46 46 47 48 50 51
Abdominal Pain Abdominal Trauma Acute Dystonic Reaction Altered Mental Status and Psychiatric Disorders Amputation/Laceration/Soft Tissue Injury Anaphylaxis Barotrauma - Decompression Sickness and Arterial Gas Embolism Burns Cardiac- Chest Pain Cardiac- ST Elevation MI (STEMI) Cardiac- Dysrhythmias	41 42 43 44 45 46 46 47 48 50 51 52
Abdominal Pain Abdominal Trauma Acute Dystonic Reaction Altered Mental Status and Psychiatric Disorders Amputation/Laceration/Soft Tissue Injury Anaphylaxis Barotrauma - Decompression Sickness and Arterial Gas Embolism Burns Cardiac- Chest Pain Cardiac- ST Elevation MI (STEMI) Cardiac- Dysrhythmias Cardiac- Asystole / Pulseless Electrical Activity (PEA)	41 42 43 43 44 45 46 46 47 48 50 51 52 53
Abdominal Pain Abdominal Trauma Acute Dystonic Reaction Altered Mental Status and Psychiatric Disorders Amputation/Laceration/Soft Tissue Injury Anaphylaxis Barotrauma - Decompression Sickness and Arterial Gas Embolism Burns Cardiac- Chest Pain Cardiac- ST Elevation MI (STEMI) Cardiac- Dysrhythmias Cardiac- Asystole / Pulseless Electrical Activity (PEA) Cardiac- Pediatric Bradycardia	41 42 43 44 45 46 47 46 47 48 50 51 51 52 53 53
Abdominal Pain Abdominal Trauma Acute Dystonic Reaction Altered Mental Status and Psychiatric Disorders Amputation/Laceration/Soft Tissue Injury Anaphylaxis Barotrauma - Decompression Sickness and Arterial Gas Embolism Burns Cardiac- Chest Pain Cardiac- Chest Pain Cardiac- ST Elevation MI (STEMI) Cardiac- Dysrhythmias Cardiac- Asystole / Pulseless Electrical Activity (PEA) Cardiac- Pediatric Bradycardia Cardiac- Bradycardia, Symptomatic	41 42 43 44 45 45 46 47 48 50 51 51 52 53 54 55
Abdominal Pain Abdominal Trauma Acute Dystonic Reaction Altered Mental Status and Psychiatric Disorders Amputation/Laceration/Soft Tissue Injury Anaphylaxis Barotrauma - Decompression Sickness and Arterial Gas Embolism Burns Cardiac- Chest Pain Cardiac- Chest Pain Cardiac- ST Elevation MI (STEMI) Cardiac- Dysrhythmias Cardiac- Asystole / Pulseless Electrical Activity (PEA) Cardiac- Pediatric Bradycardia Cardiac- Bradycardia, Symptomatic Cardiac- Pediatric Tachycardia	41 42 43 44 45 46 46 47 48 50 51 52 53 54 55 56
Abdominal Pain Abdominal Trauma Acute Dystonic Reaction Altered Mental Status and Psychiatric Disorders Amputation/Laceration/Soft Tissue Injury Anaphylaxis Barotrauma - Decompression Sickness and Arterial Gas Embolism Burns Cardiac- Chest Pain Cardiac- ST Elevation MI (STEMI) Cardiac- Dysrhythmias Cardiac- Asystole / Pulseless Electrical Activity (PEA) Cardiac- Pediatric Bradycardia Cardiac- Bradycardia, Symptomatic. Cardiac- Pediatric Tachycardia Cardiac- Tachycardia - Narrow Complex	41 42 43 44 44 45 46 47 46 47 48 50 51 51 52 53 53 54 55 55 56 57
Abdominal Pain Abdominal Trauma Acute Dystonic Reaction Altered Mental Status and Psychiatric Disorders Amputation/Laceration/Soft Tissue Injury Anaphylaxis Barotrauma - Decompression Sickness and Arterial Gas Embolism Burns Cardiac- Chest Pain Cardiac- Chest Pain Cardiac- ST Elevation MI (STEMI) Cardiac- Dysrhythmias Cardiac- Asystole / Pulseless Electrical Activity (PEA) Cardiac- Pediatric Bradycardia Cardiac- Bradycardia, Symptomatic. Cardiac- Pediatric Tachycardia Cardiac- Tachycardia - Narrow Complex Cardiac- Tachycardia - Wide Complex	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$
Abdominal Pain Abdominal Trauma Acute Dystonic Reaction Altered Mental Status and Psychiatric Disorders Amputation/Laceration/Soft Tissue Injury Anaphylaxis Barotrauma - Decompression Sickness and Arterial Gas Embolism Burns Cardiac- Chest Pain Cardiac- Chest Pain Cardiac- ST Elevation MI (STEMI) Cardiac- Dysrhythmias Cardiac- Dysrhythmias Cardiac- Pediatric Bradycardia Cardiac- Pediatric Bradycardia Cardiac- Bradycardia, Symptomatic Cardiac- Pediatric Tachycardia Cardiac- Tachycardia - Narrow Complex Cardiac- Tachycardia - Wide Complex Cardiac- Ventricular Fibrillation/Pulseless Ventricular Tachycardia (VF/VT)	41 42 43 44 45 46 46 47 48 50 51 52 53 54 55 56 57 58 59
Abdominal Pain Abdominal Trauma Acute Dystonic Reaction Altered Mental Status and Psychiatric Disorders Amputation/Laceration/Soft Tissue Injury Anaphylaxis Barotrauma - Decompression Sickness and Arterial Gas Embolism Burns. Cardiac- Chest Pain Cardiac- ST Elevation MI (STEMI) Cardiac- ST Elevation MI (STEMI) Cardiac- Dysrhythmias Cardiac- Asystole / Pulseless Electrical Activity (PEA) Cardiac- Pediatric Bradycardia Cardiac- Bradycardia, Symptomatic. Cardiac- Pediatric Tachycardia Cardiac- Tachycardia - Narrow Complex Cardiac- Tachycardia - Narrow Complex Cardiac- Ventricular Fibrillation/Pulseless Ventricular Tachycardia (VF/VT). Cerebral Vascular Accident (CVA or Stroke)	$\begin{array}{c} & -76 \\ & -41 \\ & 42 \\ & 43 \\ & 44 \\ & 45 \\ & 46 \\ & 47 \\ & 46 \\ & 57 \\ & 50 \\ & 51 \\ & 50 \\ & 51 \\ & 52 \\ & 53 \\ & 54 \\ & 55 \\ & 56 \\ & 57 \\ & 58 \\ & 59 \\ & 60 \end{array}$
Abdominal Pain Abdominal Trauma Acute Dystonic Reaction Altered Mental Status and Psychiatric Disorders Amputation/Laceration/Soft Tissue Injury Anaphylaxis Barotrauma - Decompression Sickness and Arterial Gas Embolism Burns Cardiac- Chest Pain Cardiac- ST Elevation MI (STEMI) Cardiac- ST Elevation MI (STEMI) Cardiac- Asystole / Pulseless Electrical Activity (PEA) Cardiac- Pediatric Bradycardia Cardiac- Bradycardia, Symptomatic Cardiac- Pediatric Tachycardia Cardiac- Tachycardia - Narrow Complex Cardiac- Tachycardia - Wide Complex Cardiac- Ventricular Fibrillation/Pulseless Ventricular Tachycardia (VF/VT) Cerebral Vascular Accident (CVA or Stroke) Chest Trauma	$\begin{array}{c} & -76 \\ & -41 \\ & 42 \\ & 43 \\ & 44 \\ & 45 \\ & 46 \\ & 47 \\ & 48 \\ & 50 \\ & 57 \\ & 52 \\ & 53 \\ & 51 \\ & 52 \\ & 53 \\ & 55 \\ & 55 \\ & 55 \\ & 56 \\ & 57 \\ & 58 \\ & 59 \\ & 60 \\ & 61 \end{array}$
Abdominal Pain Abdominal Trauma Acute Dystonic Reaction Altered Mental Status and Psychiatric Disorders Amputation/Laceration/Soft Tissue Injury Anaphylaxis Barotrauma - Decompression Sickness and Arterial Gas Embolism Burns Cardiac- Chest Pain Cardiac- ST Elevation MI (STEMI) Cardiac- Dysrhythmias Cardiac- Pediatric Bradycardia Cardiac- Pediatric Bradycardia Cardiac- Pediatric Tachycardia Cardiac- Tachycardia - Narrow Complex Cardiac- Tachycardia - Wide Complex Cardiac- Ventricular Fibrillation/Pulseless Ventricular Tachycardia (VF/VT) Cerebral Vascular Accident (CVA or Stroke) Child Birth- Care of the Newborn	$\begin{array}{c} & 41 \\ & 42 \\ & 43 \\ & 44 \\ & 45 \\ & 46 \\ & 47 \\ & 48 \\ & 50 \\ & 51 \\ & 52 \\ & 51 \\ & 52 \\ & 53 \\ & 54 \\ & 55 \\ & 56 \\ & 57 \\ & 58 \\ & 59 \\ & 60 \\ & 61 \\ & 62 \end{array}$
Abdominal Pain Abdominal Trauma Acute Dystonic Reaction Altered Mental Status and Psychiatric Disorders Amputation/Laceration/Soft Tissue Injury Anaphylaxis Barotrauma - Decompression Sickness and Arterial Gas Embolism Burns Cardiac- Chest Pain Cardiac- ST Elevation MI (STEMI) Cardiac- Dysrhythmias Cardiac- Pediatric Bradycardia Cardiac- Pediatric Tachycardia Cardiac- Pediatric Tachycardia Cardiac- Tachycardia - Narrow Complex Cardiac- Ventricular Fibrillation/Pulseless Ventricular Tachycardia (VF/VT) Cerebral Vascular Accident (CVA or Stroke) Child Birth- Care of the Newborn Child Birth- Uncomplicated Child Birth	$\begin{array}{c} & 41 \\ & 42 \\ & 43 \\ & 44 \\ & 45 \\ & 46 \\ & 47 \\ & 48 \\ & 50 \\ & 51 \\ & 52 \\ & 53 \\ & 51 \\ & 52 \\ & 53 \\ & 54 \\ & 55 \\ & 55 \\ & 56 \\ & 57 \\ & 58 \\ & 59 \\ & 60 \\ & 61 \\ & 62 \\ & 63 \end{array}$
Abdominal Pain Abdominal Trauma Acute Dystonic Reaction Altered Mental Status and Psychiatric Disorders Amputation/Laceration/Soft Tissue Injury Anaphylaxis Barotrauma - Decompression Sickness and Arterial Gas Embolism Burns Cardiac- Chest Pain Cardiac- ST Elevation MI (STEMI). Cardiac- Dysrhythmias Cardiac- Pediatric Bradycardia Cardiac- Pediatric Bradycardia Cardiac- Pediatric Tachycardia Cardiac- Tachycardia - Narrow Complex Cardiac- Tachycardia - Wide Complex Cardiac- Ventricular Fibrillation/Pulseless Ventricular Tachycardia (VF/VT) Cerebral Vascular Accident (CVA or Stroke) Chest Trauma Child Birth- Care of the Newborn Child Birth- Newborn Care – Complications	$\begin{array}{c} & -76 \\ & -41 \\ & 42 \\ & 43 \\ & 44 \\ & 45 \\ & 46 \\ & 47 \\ & 48 \\ & 50 \\ & 57 \\ & 52 \\ & 53 \\ & 51 \\ & 52 \\ & 53 \\ & 51 \\ & 52 \\ & 53 \\ & 51 \\ & 52 \\ & 53 \\ & 55 \\ & 55 \\ & 56 \\ & 57 \\ & 58 \\ & 59 \\ & 60 \\ & 61 \\ & 62 \\ & 63 \\ & 64 \end{array}$

Child Birth- Post-Partum Hemorrhage	67
Child Birth- Breech Delivery	
Child Birth- Pre-Eclampsia/Eclampsia	69
Coma	70
Do Not Resuscitate	71
Epistaxis (Nosebleed)	74
Fractures & Dislocations	75
Head Trauma	76
Heat Illnesses	77
Hyperglycemia	
Hypertensive Emergencies	79
Hypoglycemia	
Hypothermia	
Inhalation Injuries	
Insect Stings and Animal/Spider Bites	
Nausea & Vomiting	
Near Drowning	
Nerve Agent/Organophosphate Poisoning	
Pain Management	
Poisons & Overdoses	
Respiratory Distress	
Respiratory Distress - Asthma	
CHF/Pulmonary Edema	
COPD Exacerbation	
Seizures	
Shock	
Snake Bites	
Spine Trauma	
Svncope	
Trauma System Entry	
Vaginal Bleeding	
SECTION C	
Acetaminophen	103
Acetylsalicylic Acid (ASA Aspirin)	104
Activated Charcoal	105
Adenosine	106
Albuterol	107
Amiodarone	108
Atropine Sulfate	109
Calcium Chloride	110
Crystalloid	111
Diazenam (Optional)	112
Diphenhydramine	113
Donamine	114
Fpinephrine	115
Etomidate	117
Fentanyl	118
Glucagon Hydrochloride	110
Glucose - Dextrose	
Haloperidol	120
Influenza Vaccination Injection	121

	Influenze Vessingtion Need Mist	11	າງ
	Initiuenza vaccination Nasar Wist	14 14	23
	Ketemine	1⊿ 14	24 25
		1⊿ 14	20
		14 14	20
	Lorazepam	14	27
	Magnesium Suitate	1	20
	Mark 1 Autoinjector (Atropine & Pralidoxime Chloride)	1	29
	Midazolam	1	30
	Morphine	1	31
	Naloxone	1:	32
	Nitroglycerin	1:	33
	Norepinephrine	1:	33
	Ondansetron	1:	35
	Ondansetron (Oral Dissolving Tablet)	1:	36
	Oxygen (O2)	1:	37
	Oxymetazoline	1:	38
	Oxytocin	1:	39
	Rocuronium (Temporary Replacement to Vecuronium)	14	40
	Sodium Bicarbonate (NaHCO3)	14	41
	Succinylcholine Chloride	14	42
	Vecuronium (Optional)	14	43
S	ECTION D	2	44
	12 Lead ECG	14	45
	Airway – Supraglottic Airway Device	14	46
	Airway - Endotracheal Intubation (Oral and Digital)	14	47
	Airway - Surgical Cricothyrotomy	14	48
	Automatic External Defibrillator (AED)	14	49
	Chest Decompression (Needle Thoracentesis).	1	50
	Continuous Positive Airway Pressure (CPAP)	1!	51
	End Tidal CO2 Detector	1!	52
	Endotracheal Intubation	1!	53
	External Transcutaneous Pacing	1!	54
	Influenza Vaccination Nasal Mist	1!	55
	Intraosseous Infusion F7-IO®	1!	56
	Intraosseous Infusion (Lower Extremity)	1!	58
	Intravenous Administration	1!	59
	Nasogastric/Orogastric Tube Placement	1(60
	Nebulizer Setup	1(62
	Pelvic Sling	1(63
	Percutaneous Cricothyrotomy	1(64
	Patient Restraint	1(65
	Public Use Automatic External Defibrillator (AED)	1(66
	Rapid Sequence Intubation	1(68
	Rectal Diazenam (Valium) Administration	1(69
	Spinal Motion Restriction and Immobilization	1	70
	Synchronized Cardioversion	1	72
	Tazer Dart Removal	1	י <u>ר</u> 73
	Tracheostomy Care	1	7 <u>/</u>
	Transport Ventilator	11 1	75
	Implication Catheterization	11 1	76
	Vagal Manguyare	1 1	77
		1.	11

SECTION E	
Introduction	
Overview of MCI Plan	
Overview of Position Duties	
Conclusion of an MCI	
Steps for Initial Size up At MCI	
EMS Transportation Log	
Post-Incident Analysis Report	
Post-Incident Transporting Agency Patient Audit	
Glossary	
Suggested Organizational Chart	
SECTION F.	
COVID-19 Patient Management [,] Purpose	197
Procedure	197
Treatment	199



Administrative Rules and Operations Protocols

Section A

Role and Responsibility of Supervising Physician

The supervising physician will fulfill his responsibilities as described in current Oregon Administrative Rules (OAR 847-35-0001, -0020 and -0025). (http://arcweb.sos.state.or.us/pages/rules/oars 800/oar 847/847 035.html).

These responsibilities shall include:

- 1. Responsible for the issuance, review and maintenance of medical standing orders within the scope of practice not to exceed the education, scope of practice, training and licensure of EMRs, EMTs and Paramedics. Standing orders shall be reviewed and revised at least annually.
- 2. Explains the medical standing orders to the EMRs, EMTs and Paramedics such that they understand their responsibilities and do not exceed their scope of practice as defined by OAR 847-35-0030.
- 3. Responsible for ascertaining that and EMRs, EMTs and Paramedics are currently licensed and in good standing with the Oregon Health Authority.
- 4. Provides regular review of EMR, EMT and Paramedic practices in person or by an appropriate designee. This review will include one or more of the following:
 - a. Direct observation of field performance.
 - b. Review of pre-hospital care reports.
 - c. Detailed case review and discussion with individual EMRs, EMTs and Paramedics or the appropriate agencies of any problems that may affect the delivery of appropriate medical services.
- 5. Responsible for coordinating continuing education (at least quarterly.) Topics will include but not be limited to:
 - a. Trauma management
 - b. IV and interosseous therapy
 - c. Airway management
 - d. CPR/ACLS
 - e. Pre-hospital pharmacology
- 6. Reports to the Oregon Health Authority and employer any action or behavior by EMRs, EMTs or Paramedic which could be cause for disciplinary action.
- 7. Suspends or revokes the privilege of any EMR, EMT or Paramedic to operate under his or her license without prior notice if there is any reasonable cause to believe that the EMR, EMT or Paramedic is not adhering to the standards established in the standing orders, or if other serious personal problems exist which interfere with the delivery of appropriate medical care. The supervising physician shall coordinate any such action with the EMR's, EMT's or Paramedic's employer or agency.
- 8. In the case of an extended absence, the supervising physician may designate a qualified physician to perform the duties of supervising physician.

9. Meet with supervised Paramedics, EMTs and EMRs at least 2 hours every year.

Registered nurses (RNs) operating under these protocols for fixed wing transports must comply with OAR 333-255-080 (2)(3). RNs operating under these protocols for rotary wing aircraft (OAR 333-255-080[4]) or functioning as a paramedic on a ground ambulance (333-255-070[6][d]) shall have (1) current AHA level C or ARC BLS for the Professional, (2) current ACLS, (3) PALS course completion, (4) PHTLS, BTLS TEAM or TNCC course completion (TEAM and TNCC must include training in pre-hospital rapid extrication). RNs must also attend the same yearly required case reviews and skills performance reviews as EMT-Ps.

Personal Protection from Infection Control

- 1. All patients will be treated using "Standard Precautions" which includes wearing gloves, changing gloves after contact with potentially infective material, removing gloves before driving or touching common surfaces, and washing hands immediately following patient contact.
- 2. Additional contact precautions (isolation gowns) will be taken if you anticipate that your clothing will have substantial contact with the infected patient, their bodily fluids, or their environmental surfaces.
- 3. Droplet precautions which include eye protection will be taken for patients that can generate droplets during coughing, sneezing, or the performance of procedures, such as placing an airway.
- 4. Respiratory precautions which includes the use of a fit-tested NIOSH-approved N95 mask for patients with suspected or known infections transmitted by droplets that remain suspended in the air such as but not limited to:
 - a. Measles
 - b. Varicella (chicken pox)
 - c. Tuberculosis

Standard of Care for Klamath County EMS Personnel

- 1. A patient is a person who presents with:
 - a. An injury or illness, with or without chief complaint; or
 - b. A chief complaint of or have a altered level of consciousness, with or without apparent injury or illness; or
 - c. A mechanism of injury which raises the index of suspicion for injury.
- 2. All Klamath County EMRs, EMTs and Paramedics will be expected to conduct themselves in a professional manner.
- 3. EMRs, EMTs and Paramedics will treat all patients with dignity and respect. Patient's medical information will be treated in a confidential manner.
- 4. EMS personnel's first priority in the field will be scene safety for themselves, patients and the public. This may include staging a safe distance away until scene is safe. This will include the use of appropriate personal protective equipment.

- 5. Patients with the most severe or life threatening injuries or illnesses will be treated first, except in the event of a multiple patient scene/mass casualty incident where the field resources are overwhelmed. Patient management will begin with the ABCs and CPR if appropriate. Once adequate life support is established EMS personnel will perform the primary and secondary survey to determine and then treat illness or injury. Treatment and drug standing orders will be followed based on the patient's condition and the EMR's or EMT's level of training and licensure. Patient's condition will be monitored frequently including vital signs (pulse, blood pressure, temperature, and respirations), pulse oximetry, mental status, etc. EMS personnel are expected to use their knowledge, training, judgment and expertise in pre-hospital care when caring for patients under these standing orders. EMRs, EMTs and Paramedics will not exceed their respective scopes of practice as established by Oregon law. When possible and appropriate, pre-hospital personnel will follow the desires and wishes of patients and their families.
- 6. Patient care will include documentation in a professional and timely manner to facilitate further evaluation and treatment.
- 7. Differences of opinion and criticism of agencies or personnel will not interfere with patient care. If not quickly, quietly and easily resolvable in the field such matters should be referred to the agencies involved or the supervising physician for investigation, discussion and resolution.

Scope of Practice

EMRs, EMTs and Paramedics shall always function within their scope of practice even if requested to do otherwise. EMRs, EMTs and Paramedics operating under these standing orders have the scope of practice as described in current Oregon Administrative Rules, (OAR)) and are expected to provide this level of care.

847-035 (<u>http://arcweb.sos.state.or.us/pages/rules/oars_800/oar_847/847_035.html</u>) and 333-265 (<u>http://arcweb.sos.state.or.us/pages/rules/oars_300/oar_333/333_265.html</u>)

Oregon EMT levels are to come in line with the National Registry of EMTs (NREMT). Until this change has completely taken effect, these equivalencies will be used in these Standing Orders:

Old levels	New levels
First Responder	Emergency Medical Responder (EMR)
EMT-Basic (EMT-B)	Emergency Medical Technician (EMT)
(none)	Advanced Emergency Medical Technician (AEMT)
EMT-Intermediate (EMT-I)	EMT-Intermediate (EMT-I) (Oregon-specific)
EMT-Paramedic (EMT-P)	Paramedic

Scene Authority

1. Medical Decisions: EMRs, EMTs and Paramedics on scene shall cooperate in providing the optimum care for the patient. It is important to recognize and utilize the training and expertise of all available personnel. The highest level EMT or Paramedic on the scene shall be responsible for patient care and transport decisions until released to an EMT or Paramedic of equal or higher level. Upon release for transport, the EMT or Paramedic with the transporting agency shall be responsible for patient care and transport decisions. EMRs may assist with

the patient care during transport. Information regarding the injury or illness, as appropriate for continued medical care, shall be communicated to the transporting EMRs, EMTs or Paramedics.

2. Medical Professionals on the Scene: Medical professionals at the scene of an emergency may provide assistance to EMRs, EMTs and Paramedics, and shall be treated with professional courtesy.

Medical professionals who offer their assistance at the scene should be asked to identify themselves and their level of training. The EMT should request that the medical professional provide proof of his/her identity if he/she wishes to assist with care given to the patient after the arrival of the paramedic unit.

Physicians are the only medical professionals who may assume control of the care of the patient. The EMT should recognize the knowledge and expertise of other medical professionals and use them for the best outcome of the patient.

The authority for medical control of paramedic procedures rests with ORS statutes, these written treatment protocols approved by the supervising physician and the receiving hospital's emergency physician when contacted.

A physician on the scene who is caring for a patient prior to the arrival of a paramedic unit may retain medical responsibility for the patient if he/she so desires. The EMT should advise the physician who wishes to <u>supervise or direct</u> patient care, that the physician <u>must accompany</u> the patient to the hospital to maintain continuity of patient care. The physician on the scene shall have made available to him/her the services and equipment of the paramedic unit, if requested. There should be full documentation of these events, including the physician's name and address.

If a conflict arises about patient care or treatment protocols, the EMT should call the receiving hospital for assistance.

3. Disputes on Scene:

- a. <u>Disagreements about care should be handled in a professional manner so as not to detract</u> <u>from patient care.</u>
- b. Standing orders should be followed whenever possible, and should be the basis for resolving disputes.
- c. If there is an unresolved dispute between EMRs, EMTs, and Paramedics and medical professionals concerning the care of a patient, the receiving hospital may need to be contacted for resolution.
- d. A written incident report should be prepared concerning any dispute arising at the scene and given to the supervising physician for review.
- 4. Quick Responder Transport Policy: Non-transporting first responder agencies, with licensed ambulance capability, may transport patients to local medical facilities under the following conditions:
 - a. Any critical or unstable patient who is packaged and ready for transport, and whose clinical condition would likely deteriorate in the judgment of the senior EMT on scene, if there is a significant delay in the arrival of the transporting ambulance.

- b. If the patient requires immediate intervention beyond the capabilities of on-scene personnel, the quick responder, whether ALS or BLS may transport immediately.
- c. Quick responder's units may transport if requested to by the ASA provider, or if no provider is responding or are under contractual agreement with the ASA provider.
- d. In the event of a multiple patient scene or mass casualty incident, any quick responder's unit may transport, if directed to do so by on-scene medical branch director or incident commander.
- e. Any BLS responder who transports a patient that might benefit from ALS treatment must request an ALS intercept.

Medical Control

- 1. Off-Line Medical Control includes the following:
 - a. Standing orders approved by the supervising physicians.
 - b. Written patient orders and protocols pertaining to a specific transport.
 - c. Case review conferences.
 - d. Educational programs.
 - e. Quality assurance case reviews.
 - f. Individual criticism, counseling, or advice concerning the care rendered to specific patients.
 - g. Coordination with the directors of local hospitals' emergency departments.

2. On-Line Medical Control

- a. On-line Medical Control refers to direct radio and/or phone communication between prehospital care personnel and hospital emergency departments which are staffed 24 hours a day by qualified emergency physicians.
- b. Emergency physicians should be ACLS and ATLS certified and be familiar with the prehospital care protocols and the capabilities of local EMS providers.
- c. On-line medical control may override written protocols when appropriate; such as:
 - i. Directing medical care for patients within pre-hospital care provider's scope of practice.
 - ii. Routing patients to appropriate hospital destination considering the number of patients, patient needs (pediatric, psychiatric, obstetric, trauma) or hospital availability of specialty beds, operating rooms or imaging procedures.

3. Procedure For Obtaining On-Line Medical Control

- a. EMRs, EMTs and Paramedics will follow the appropriate standing orders for pre-hospital care. If uncertain of protocol or treatment, contact the emergency physician at the receiving hospital for on-line medical control.
- b. In situations where the patient's condition is judged to be critical or serious, and especially

when there are multiple critically ill or injured patients, early notification of the receiving hospital is mandatory. This will allow proper allocation of medical resources and timely preparation for definitive care.

- c. All requests by EMS personnel for medical guidance will be accommodated promptly and reflect an attitude of joint responsibility and cooperation. The on-line emergency physician shall issue treatment and transport instructions based on an objective analysis of the patient's needs and the hospital's capability and proximity. No effort shall be made to obtain institutional or commercial advantage through the use of such transport instructions and hospital assignments. When an emergency department at one hospital is acting as agent for another hospital, information regarding the patients shall be communicated to the receiving hospital in an accurate and timely manner. The transmission of information regarding patient's identity, condition, and treatment shall otherwise remain strictly confidential.
- d. All emergency departments and pre-hospital care providers operating under the protocols of these standing orders shall maintain radio communication equipment which meets the standards of the Oregon Health Authority. All first response units will have Med Net 1 (155.340) frequency.
- e. Any difficulties or problems that arise within the medical control system shall be communicated to the supervising physicians for clarification or resolution.
- f. Medical control should not unnecessarily delay medical or surgical treatment. For patients who fulfill the trauma system criteria, medical control shall be assumed by the facility which will be receiving and caring for the patient.

4. Triage And Transport

The decision concerning which hospital will be receiving the patient will be determined by a consideration of the following regarding Trauma System Entry patients:

- a. Patients with an unstable or compromised airway will be taken to the nearest hospital for initial airway management.
- b. Trauma system entry patients will have Oregon State trauma bands (green) applied.
- c. Whenever possible, keep family members together and transport a parent or other responsible family member along with any pediatric patient.
- d. If a qualified physician is present with the patient and wishes to assume responsibility for patient care and accompany the patient, transport will be to the facility indicated by the physician.
- e. For patients being transferred from one facility to another, medical control shall be assumed by the transferring facility.

5. EMS Communication Procedures

- a. Radio communication should be short and concise providing enough information so that the hospital's emergency personnel will have a good idea of the patient's condition and type of injury or illness. Suggested format of the radio report is:
 - iii. Unit transporting, person treating and response code of transport.

- iv. Patient information including age, sex, and reason for dispatch.
- v. Patient status including vitals, history and treatment.
- vi. Patient meds and allergies if pertinent to the call.
- vii. ETA to hospital
- b. Communication with the receiving hospital should be established as soon as practical once transport is begun.
- c. This report should relay only essential patient care information. Patient identification (name) information is not appropriate to be given on the med net frequency for emergency transports. Patient initials may be used for direct admission and routine transfer patients.
- d. Ambulances responding to the scene of a reported "injury" or "unknown if injury" MVC may be cancelled enroute only after dispatch has received a "non-injury" or "unable to locate" MVC report by a law enforcement, ODOT, or fire unit on scene

6. Klamath County EMS Communication Form

Shall be formatted according to the Agency preference, but shall at least have the following information:

Date; time; Transporting Unit; Transporting EMT and Level; ETA; Pt Age; Pt Sex; Pt Physician; STEMI alert; Trauma System activation; Chief Complaint/ Injury; MCI triage patient status color; Brief narrative for physical findings; Vitals including: B/P; Pulse; Respirations; LOC; Treatment & Response; and GCS

Patient Defined

Under these Standing Orders, a person is considered a patient in the pre-hospital setting if the responding EMR, EMT, or Paramedic has the duty to act, and the victim meets at least one of the following criteria:

- 1. Appears ill, or injured to the EMR, EMT or Paramedic; or
- 2. Has experienced a mechanism to cause injury, whether obvious or hidden; or
- 3. Shows signs of altered level of consciousness from their baseline mentation; or
- 4. Requests an assessment, treatment, and/or transport.

The Decision-Maker

According to ORS 109.640 and ORS 109.520, a patient who is a minor of at least 15 years of age can legally give their own informed medical consent without a parent or guardian, (younger if they are legally married or emancipated). Further, according to ORS 109.675 a minor 14 years of age or older may obtain, without parental knowledge or consent, outpatient (emergency) diagnosis or treatment of a mental or emotional disorder or a chemical dependency,

In order to further determine a patient's ability to consent or refuse, their decision making capacity must be evaluated. Assessing the patient's decision making capacity is more complex than just assessing patient's level of consciousness or ability to communicate.

It will be obvious when the patient's capacity as a competent decision maker is completely compromised. However, there is no tool to determine exactly when the patient goes from competent to incompetent because of intoxicants or medical condition. Under these orders, it is the responsibility of the EMR, EMT, or Paramedic, in charge to deduce when the patient cannot make competent decisions and document how they arrived at that decision.

Medical Consent

Under these Standing Orders, a patient, or their legal guardian, must give consent to the EMR, EMT or Paramedic to be evaluated, treated, and/or transported. Consent can be "informed" or "implied" consent.

<u>Informed Consent</u> is permission granted before the treatment based on the patient's understanding of the medical evaluations or interventions to be performed.

<u>Implied Consent</u> is when the patient does not verbalize consent, but takes actions toward consenting, or has a serious emergency condition that keeps them from consenting.

- 1. Consent is generally implied with the act of calling EMS,
- 2. During very serious emergency situations the Doctrine of Implied Consent may apply. Under this doctrine the EMR, EMT or Paramedic can assume consent is implied when:
 - a. A patient is incapacitated by shock or trauma and unable to give informed judgment, or
 - b. A patient has life-threatening or health-threatening disease or injury that requires immediate treatment, and delay would mean death or impairment

Medical Refusal

Under these Standing Orders a patient, (or guardian) with whom competent decision-maker status has been established, may refuse medical evaluation, treatment and/or transport when <u>all</u> of the following conditions are met:

- 1. The patient is conscious and alert, and has the freedom to act without undue influence from family or friends; and
- 2. The patient medical condition is stable, and thus not subject to the doctrine of implied consent; and
- 3. The patient possesses sufficient information about the associated risks and benefits of all treatment options, which include refusal of care; and
- 4. The patient has the ability to use this information to make a decision, and communicate their choice.

When a patient is determined not to have capacity as a decision-maker, and thus cannot refuse medical care on their own, the following should be done to protect the patient:

- 1. An attempt should be made to contact the patient's family or friends so they can take control of the patient and arrange for proper medical care.
- 2. Call for law enforcement to assist in assessing for intoxication and thus helping document the patient's inability to make competent decisions.
- 3. Contact on-line medical control for advice.

Documenting Refusals

- 1. The Agency's patient's refusal form must be signed and witnessed and the signed document made a part of the permanent PCR record.
- 2. The PCR must record how decision-maker status was established including mental status and any other means used to determine the patient's competency.
- 3. The PCR must include documentation of the circumstances surrounding the patient refusal, and all actions taken by the EMR, EMT, or Paramedic of the attempted medical treatment.

Death in the Field

- 1. ORS allows an EMT to determine "Death in the Field"; however, the EMT is encouraged to consult Medical Control if any doubt exists.
 - a. Trauma codes have a very low statistical save rate. However, if the mechanism of injury doesn't fit a trauma death, such as a minor vehicle crash. Consider if the patient had a medical death that caused the accident. V-Fib should raise your index of suspicion for a medical event.
 - b. In a deteriorating trauma patient, no pulse and a viable rhythm may reflect hypovolemia or obstructive shock such as tamponade or tension pneumothorax, and aggressive care should be continued. A narrow complex rhythm (QRS < .12) may suggest profound hypovolemia, and the patient may respond to fluid resuscitation.</p>
 - c. Consider the value of delivering a viable organ donor patient to the hospital
- 2. EMT Basics may withhold resuscitation efforts, or stop efforts started by bystanders, if the patient has no spontaneous pulse or respirations, and any one of the following conditions exist:
 - a. Valid "DNR" (POLST);
 - b. Decapitation;
 - c. Incineration of the face, neck or torso;
 - d. The patient has skin discoloration in dependent body parts (dependent lividity);
 - e. Any stage of body decomposition or putrifacation;
 - f. Pulseless and apneic in a mass casualty incident;
 - g. Rigor mortis in a warm environment;
 - h. Major blunt trauma patient remains apneic after opening the airway; or
 - i. Avulsion or other traumatic removal of any vital body organ.
- 3. EMT Intermediates and Paramedics, in addition to the above: Online medical control may be contacted prior to withholding or stopping resuscitation in the following circumstances:
 - a. PEA and an ETCO2 of 10 or less after 20 minutes of ACLS.
 - b. Patient found in asystole, and if after the asystole protocol has been initiated the patient persists in asystole in three separate leads.
- 4. EMT Intermediates and Paramedics must contact online medical control before withholding or stopping resuscitation efforts in the following circumstances:
 - a. Patients aged 50 years or less.
 - b. Patient initially found in a viable rhythm then degenerates into a cardiac rhythm incompatible with life.
 - c. Refractory V-Fib lasting longer than 5 rounds of ACLS including two antiarrhythmic
- 5. Under ORS 146.090 the following deaths must be investigated. EMRs, EMTs and Paramedics should be aware of these situations and not let on-scene operations needlessly interfere or hamper the investigations.

- a. Apparent homicide, suicide or death occurring under suspicious or unknown circumstances;
- b. Resulting from the unlawful use of controlled substances or the use or abuse of chemicals or toxic agents;
- c. Occurring while incarcerated in any jail, correction facility or police custody;
- d. Apparent accidental or death following an injury;
- e. By disease, injury or toxic agent during or arising from employment;
- f. Unattended deaths (not under care of a physician within two weeks previous to the death)
- g. Related to disease which might constitute a threat to the public health; or
- h. A human body disposed of in an offensive manner.
- 6. When it is determined that the patient is deceased, if not already done, immediately request law enforcement. The body shall not be moved, and any invasive medical equipment such as IV's, IO's, ET tubes, etc. shall not be removed without prior approval from the Medical Examiner, or their deputy.
- 7. If available, consider chaplaincy for the family. If necessary, the body may be covered in a way that is appropriate in consideration of the weather, public decency and viewing by the family. For a body or bodies still in a vehicle near passing traffic, consider a tarp for the entire vehicle.
- 8. This section refers to either patients, or dead bodies. One cannot be treated under these standing orders as both at the same time. Dead bodies shall not be transported via ambulance, and care must be taken to avoid this situation.

		0	reaon	POLST			
		Portable O	rders for Lif	e-Sustaining Treat	ment*		
Follow	these medical orders until or	rders chance	ie. Anv sec	tion not complete	d implies f	full treatment for that sec	tion.
Patient L	.ast Name:	Suffix:	Patient First	Name:	F	Patient Middle Name:	
Preferred	d Name:	Date of Bir	th: (mm/dd/y	yyy) Gender:	_F;	MRN (optional)	
Address:	(street / city / state zip):						
Δ	CARDIOPULMONARY R	ESUSCITA	ATION (C	PR): Unrespo	onsive, pu	ılseless, & not breathir	ng.
Check	Attempt Resuscit	ation/CF	PR	🗆 Do No	ot Attern	npt Resuscitation/	DN
One	If patient not in cardiopulm	nonary arre	st, follow o	orders in B.			
R	MEDICAL INTERVENTIO	NS: If p	atient has	pulse and is br	eathing.		
One	medication by any route manual treatment of air hospital for life-sustain Treatment Plan: Provi	e, positioni way obstru- ning treatme ide treatme	ng, wound uction as n ents. Trans ents for co	care and other m eeded for comfort sfer if comfort nee omfort through s	easures. L Patient ds cannot symptom	Use oxygen, suction and prefers no transfer to t be met in current location management.	on.
	Limited Treatment. In antibiotics, IV fluids and	addition to d cardiac m	care desc ionitor as i	ribed in Comfort I ndicated. No intui	Measures bation, adv	Only, use medical treatr vanced airway interventi	nent ons
	or mechanical ventilation to hospital if indicated <u>Treatment Plan</u> : Provi Full Treatment. In add intubation, advanced at hospital and/or intensi <u>Treatment Plan</u> : All the Additional Orders:	on. May con d. Generall ide basic r dition to can invay interv ve care uni eatments i	nsider less ly avoid the nedical tro re describe ventions, a it if indicate including	invasive airway s intensive care u eatments. ad in Comfort Mea nd mechanical ve ed. breathing machi	support (e nit. asures On ntilation a ne.	.g. CPAP, BiPAP). <i>Tran</i> ly and Limited Treatmen is indicated. <i>Transfer to</i>	sfer
	or mechanical ventilation to hospital if indicated <u>Treatment Plan</u> : Provi Full Treatment. In addition, advanced at hospital and/or intensi <u>Treatment Plan</u> : All the Additional Orders:	on. May con d. Generall ide basic r dition to car invay interv ve care uni- eatments i	nsider less ly avoid the nedical tro- re describe rentions, a it if indicate including	invasive airway s intensive care u eatments. ed in Comfort Mea nd mechanical ve ed. breathing machi	support (e nit. asures On ntilation a ne.	.g. CPAP, BiPAP). Tran	t, us
С	or mechanical ventilation to hospital if indicated <u>Treatment Plan</u> : Provi Full Treatment. In addition, advanced at hospital and/or intensi <u>Treatment Plan</u> : All the Additional Orders: DOCUMENTATION OF V	on. May con d. General ide basic r dition to can invay interv ve care un eatments i	nsider less ly avoid the nedical tro re describe ventions, a it if indicate including	invasive airway s intensive care u eatments. Ind mechanical ve ad. breathing machi	support (e nit. asures On ntilation a ne. SSION s	.g. CPAP, BiPAP). <i>Tran</i> ly and Limited Treatmen is indicated. <i>Transfer to</i>	t, us
C	or mechanical ventilation to hospital if indicated Treatment Plan: Provi Full Treatment. In additional intubation, advanced at hospital and/or intensi Treatment Plan: All the Additional Orders: DOCUMENTATION OF V Patient Parent of minor	on. May con d. General ide basic r dition to can invay interv ve care uni eatments i NHO WAS	nsider less ly avoid the nedical tro re describe rentions, a it if indicate including	invasive airway s intensive care u eatments. ed in Comfort Mea nd mechanical ve ed. breathing machi NT For Discus Surrogate for pa significant ment	support (e nit. asures On ntilation a ne. SSION s atient with al health o	.g. CPAP, BiPAP). <i>Tran</i> ly and Limited Treatmen s indicated. <i>Transfer to</i> Gee reverse side for add'I developmental disabilitic condition (Note: Special	t, us
C Check All That Apply	or mechanical ventilation to hospital if indicated <u>Treatment Plan</u> : Provi Full Treatment. In additional orders in the spital and/or intensist <u>Treatment Plan</u> : All the Additional Orders: DOCUMENTATION OF V Patient Parent of minor	on. May con d. General ide basic r dition to car invay interv ve care un eatments i WHO WAS	nsider less ly avoid the nedical tro re describe ventions, a it if indicate including S PRESEI	invasive airway s intensive care u eatments. ed in Comfort Meand in Mechanical ve ed. breathing machi NT For Discus Surrogate for pa significant ment requirements for	support (e nit. asures On ntilation a ne. SSION s atient with al health o r completi	.g. CPAP, BiPAP). <i>Tran</i> ly and Limited Treatmen s indicated. <i>Transfer to</i> <u>see reverse side for add'I</u> developmental disabiliti condition (Note: Special on - see reverse side)	t, us
C Check All That Apply	or mechanical ventilation to hospital if indicated Treatment Plan: Provide Full Treatment. In additional intubation, advanced at hospital and/or intensite Treatment Plan: All the Additional Orders: DOCUMENTATION OF V Patient Parent of minor Person appointed on additional of the provided on additionadditional of the provided on additionadditional of the provided on	on. May con d. General ide basic r dition to can invay interv ve care un eatments i WHO WAS	nsider less ly avoid the nedical tro re describe ventions, a it if indicate including s PRESEI	 invasive airway seintensive care useintensive care useintents. ad in Comfort Meand mechanical veied. breathing maching maching significant mention requirements for a significant mention for a significant mention of the selective or frier 	support (e nit. asures On ntilation a ne. SSION s atient with al health or r completi nd (without	.g. CPAP, BiPAP). <i>Tran</i> ly and Limited Treatmen is indicated. <i>Transfer to</i> developmental disabiliti condition (Note: Special on - see reverse side) t written appointment)	t, us
C Check All That Apply	or mechanical ventilation to hospital if indicated Treatment Plan: Provi Full Treatment. In additional and/or intensi Treatment Plan: All the Additional Orders: DOCUMENTATION OF V Patient Parent of minor Person appointed on additional Court-appointed guardia Discussed with (list all name	on. May con d. General ide basic r dition to car invay interv ve care un eatments i WHO WAS	nsider less ly avoid the nedical tro re describe rentions, a it if indicate including	 invasive airway se intensive care u eatments. ed in Comfor Meand mechanical versed. breathing machi versed big significant ment requirements for a significant ment requirement for a significant ment for a significan	support (e nit. asures On ntilation a ne. SSION s atient with al health o r completi nd (without	.g. CPAP, BiPAP). <i>Tran</i> ly and Limited Treatmen is indicated. <i>Transfer to</i> <u>See reverse side for add'I</u> developmental disabiliti condition (Note: Special on - see reverse side) t written appointment)	t, us
C Check All That Apply	or mechanical ventilation to hospital if indicated Treatment Plan: Provide Full Treatment. In additional and/or intension intubation, advanced at hospital and/or intension Treatment Plan: All tree Additional Orders:	on. May con d. General ide basic r dition to can invay interv ve care un eatments i WHO WAS dvance dire an nes and rel	nsider less ly avoid the nedical tro re describe ventions, a it if indicate including s PRESEI	a invasive airway s a intensive care u eatments. ad in Comfort Mea nd mechanical ve ed. breathing machi wr For Discus Surrogate for pa significant ment requirements fo Relative or frier	support (e nit. asures On ntilation a ne. SSION s atient with al health or r completi ad (without	.g. CPAP, BiPAP). Tran ly and Limited Treatmen is indicated. Transfer to See reverse side for add'I developmental disabiliti condition (Note: Special ion - see reverse side) t written appointment)	t, us
C Check All That Apply	or mechanical ventilation to hospital if indicates Treatment Plan: Provi Full Treatment. In addition, advanced at hospital and/or intensi Treatment Plan: All the Additional Orders: DOCUMENTATION OF V Patient Parent of minor Person appointed on ad Court-appointed guardia Discussed with (list all name PATIENT OR SURROGA	on. May con d. General ide basic r dition to car invay intervive care uni- eatments i WHO WAS dvance dire an nes and rel TE SIGNA	nsider less ly avoid the nedical tro- re describe rentions, a it if indicate including s PRESEI C active ationship):	 invasive airway seintensive care ula intensive care ula atments. ed in Comfort Meand mechanical velocity breathing machi vert For Discuss Surrogate for pasignificant ment requirements for Relative or frier 	support (e nit. asures On ntilation a ne. SSION s atient with al health or r completi nd (without	.g. CPAP, BiPAP). <i>Tran</i> ly and Limited Treatmen is indicated. <i>Transfer to</i> Gee reverse side for add'I developmental disabiliti condition (Note: Special on - see reverse side) t written appointment)	t, us
C Check All That Apply	or mechanical ventilation to hospital if indicated Treatment Plan: Provide Full Treatment. In additional and/or intension intubation, advanced at hospital and/or intension Treatment Plan: All tree Additional Orders: DOCUMENTATION OF M Patient Parent of minor Person appointed on additional Court-appointed guardia Discussed with (list all name PATIENT OR SURROGA Signature: recommended	on. May con d. General ide basic r dition to car invay interv ve care uni eatments i WHO WAS dvance dire an nes and rel TE SIGNA	nsider less ly avoid the nedical tro re describe ventions, a it if indicate including s PRESEI	a invasive airway s a intensive care u eatments. ad in Comfort Mean of mechanical ve ad breathing machi NT FOR DISCUS Surrogate for pa significant ment requirements fo Relative or frier	support (e nit. asures On ntilation a ne. SSION s atient with al health o r completi ad (without	.g. CPAP, BiPAP). <i>Tran</i> ly and Limited Treatmen is indicated. <i>Transfer to</i> see reverse side for add'I developmental disabiliti condition (Note: Special on - see reverse side) t written appointment)	t, us info. es o
С <u>Сheck</u> All That Apply	or mechanical ventilation to hospital if indicates Treatment Plan: Provi Full Treatment. In addition, advanced at hospital and/or intensi Treatment Plan: All the Additional Orders: DOCUMENTATION OF V Patient Parent of minor Person appointed on additional Discussed with (list all name PATIENT OR SURROGA Signature: recommended	on. May con d. General ide basic r dition to cal invay intervive care uni- eatments i WHO WAS dvance dire an nes and rel TE SIGNA	nsider less ly avoid the nedical tro- re describe rentions, a it if indicate including s PRESEI ctive ationship): ntURE	 invasive airway se intensive care u eatments. ed in Comfort Meand mechanical versed. breathing machi verset For Discuss Surrogate for pasignificant ment requirements for Relative or frier 	support (e nit. asures On ntilation a ne. SSION s atient with al health or r completi ad (without	.g. CPAP, BiPAP). <i>Tran</i> ly and Limited Treatmen is indicated. <i>Transfer to</i> Gee reverse side for add'I developmental disabiliti condition (Note: Special on - see reverse side) t written appointment) Relationship (write "self" if p	info.
C <u>Check</u> All That Apply	or mechanical ventilation to hospital if indicates Treatment Plan: Provi Full Treatment. In additional orders and/or intensi Treatment Plan: All treatment of minor Patient Patient Parent of minor Person appointed on additional orders: Discussed with (list all name PATIENT OR SURROGA Signature: recommended This form will be ser	on. May con d. General ide basic r dition to car invay interv ve care un eatments i NHO WAS dvance dire an nes and rel TE SIGNA	nsider less ly avoid the nedical tro- ne describe re describe rentions, a it if indicate including s PRESEI strive ationship): ntURE Name (p ST Registry P / PA / N	invasive airway seintensive care u eatments. ed in Comfor Meand in Comfor Mean	support (e nit. asures On ntilation a ne. SSION S atient with al health o r completi nd (without wishes to op	.g. CPAP, BiPAP). <i>Tran</i> Ily and Limited Treatmen is indicated. <i>Transfer to</i> See reverse side for add'I developmental disabilitic condition (Note: Special on - see reverse side) t written appointment) Relationship (write "self" if p pt out, if so check opt out be	t, us info. es o
C Check All That Apply D E <u>Must</u> Print	or mechanical ventilation to hospital if indicates Treatment Plan: Provi Full Treatment. In addition, advanced at hospital and/or intensi Treatment Plan: All the Additional Orders: DOCUMENTATION OF V Patient Parent of minor Person appointed on ad Court-appointed guardia Discussed with (list all name PATIENT OR SURROGA Signature: recommended This form will be ser ATTESTATION OF MD / By signing below, I attest that current medical condition and	on. May con d. General ide basic r dition to cal invay intervive care uni- eatments i NHO WAS dvance dire an nes and rel TE SIGNA to the POL DO / NP these medic d preferences	nsider less ly avoid the nedical tro- re describe ventions, a it if indicate including s PRESEI sective ationship): ationship): Name (p ST Registry 2 / PA / N eal orders ar s.	invasive airway seintensive care u eatments. ed in Comfort Mean ind mechanical ve ed. breathing machi INT FOR DISCUS Surrogate for pa significant ment requirements fo Relative or frier Di Relative or frier print): unless the patient of ID (REQUIR e, to the best of my	support (e nit. asures On ntilation a ne. SSION S atient with al health or r completi ad (without wishes to op ED) knowledge	.g. CPAP, BiPAP). <i>Tran</i> ly and Limited Treatmen is indicated. <i>Transfer to</i> Gee reverse side for add' developmental disabilition condition (Note: Special ion - see reverse side) t written appointment) Relationship (write "self" if p pt out, if so check opt out bo	t, us info. es o
C <u>Check</u> All That Apply D E <u>Must</u> Print Name, Sign &	or mechanical ventilation to hospital if indicates Treatment Plan: Provi Full Treatment. In addition, advanced at hospital and/or intensi Treatment Plan: All the Additional Orders: DOCUMENTATION OF V Patient Parent of minor Person appointed on ad Court-appointed guardia Discussed with (list all nam PATIENT OR SURROGA Signature: recommended This form will be ser ATTESTATION OF MD / By signing below, I attest that current medical condition and Print Signing MD / DO / NP / PA	on. May con d. General ide basic r dition to cal invay intervive care uni- eatments i NHO WAS dvance dire an nes and rel TE SIGNA to the POL DO / NP these medic d preferences / ND Name: p	nsider less ly avoid the nedical tro- re describe rentions, a it if indicate including s PRESEI stationship): ationship): ationship): Name (p ST Registry P / PA / N cal orders ar s. required	e invasive airway se intensive care u eatments. ed in Comfor Meand nd mechanical ve ed. breathing machi VT For Discus Surrogate for pa significant ment requirements fo Relative or frier D Relative or frier print): unless the patient v ID (REQUIR e, to the best of my Signer Phone Num	support (e nit. asures On intilation a ne. SSION s atient with al health or r completi ad (without wishes to op ED) knowledge ber:	.g. CPAP, BiPAP). Tran Ily and Limited Treatmen is indicated. Transfer to Gee reverse side for add'I developmental disabilitic condition (Note: Special on - see reverse side) t written appointment) Relationship (write "self" if p pt out, if so check opt out be c, consistent with the patient Signer License Number: (o	info. es ol

HIPAA PERMITS DISCLOSURE TO HEALTH	CARE PROFESSIONALS	& ELECTRO	NIC REGIST	RY AS NECES	SARY FOR TREATMENT
Information Regarding POLST	PA	TIENT'S N	AME:		
 The POLST form is: Always voluntary and cannot be required. A medical order for people with a set of a medical order for people with	uired rious illness or frailty y treatment in one's cu a, with a health care pr LSO recommended (a n maker) Contact Informat	r rrent state c ofessional, n advance ion (Opti	of health (if a to reflect ne directive is onal)	something ha w treatment the appropria	appened today) wishes ite legal document to
Emergency Contact:		Relation	nship:		Phone Number:
Health Care Professional Information	on				
Preparer Name: P	reparer Title:	Phone Numb	ber:	Date Prepar	red:
PA's Supervising Physician:	70	Phone Numb	xer:		
Primary Care Professional:			_		
Direc	ctions for Health (Care Prof	essional	s	
Completing Oregon POL ST					
 All order of CFR in Section A is incompand. Photocopies, faxes, and electronical y-sign Verbal / phone orders from MD/DO/NP/PA. For information on determining the legal de A person with developmental disabilities or the POLST form; refer to <i>Guidance for Hea</i> Oregon POLST Registry Information Health Care Professionals: Send a copy of <u>both</u> sides of this POLST form to the Oregon POLST Registry unless the patient opts out. The following much be example addressed 	ND imaccordance with ecision maker(s) for inca significant mental health <i>ith Care Professionals</i> a Registry Contact Info Toll Free: 1-877-367-7 Fax or eFAX: 503-418 www.orgolstregistry.org	acility/comm acility/comm bacitated pat accordition re t www.orego prmation: 2657 -2161	unity policy u ents, refer th equires addit npolst.org. If addr confirma	Pati ess is listed of four weeks	ents: or front page, mailed for delivery.
 Patient's full name Date of birth MD / DO / NP / PA / ND signature Date signed 	polstreg@ohsu.edu Oregon POLST Regis 3181 SW Sam Jackso Mail Code: BTE 234 Portland, OR 97239	ry n Park Rd.	MAY PU	T REGISTRY	ID STICKER HERE:
Updating POLST: A POLST Form only	needs to be revised	if patient t	reatment p	references l	have changed.
This POLST should be reviewed periodically, in The patient is transferred from one care set There is a substantial change in the patient If patient wishes haven't changed, the POLST Voiding POLST: A copy of the voided A person with capacity, or the valid surroga For paper forms, draw line through sections	ncluding when: ting or care level to anot 's health status. Form does not need to b POLST <u>must</u> be sent ate of a person without ca s A through E and write "	her (including be revised, up t to the Reg apacity, can VOID* in larg	g upon admis odated, rewri jistry unles void the form ge letters if P	tten or resent ss patient ha and request of POLST is repla	to the Registry. as opted-out. alternative treatment. ced or becomes invalid.
 If included in an electronic medical record, Regardless of paper or ePOLST form, sendered. 	follow your systems ePC d a copy of the voided fo	LST voiding	procedures. LST Registr	y (required un	less patient has opted o
For permission to use the copyrighted form co Information on the Oregon POLST Program is	ntact the OHSU Center f available online at www	or Ethics in H oregonpols	lealth Care at p	at polst@ohsu olst@ohsu.e	.edu or (503) 494-3965. du.
SEND FORM WITH PATIENT WHE	NEVER TRANSFERRE	D OR DISC	HARGED,	SUBMIT COP	PY TO REGISTRY

Evaluate, Treat, and Refer

- 1. If the patient has a minor or stable medical condition, and transport to the hospital by ambulance is not indicated, then the following protocol may be used to determine the appropriateness of non-transport.
 - a. The patient must be of legal age and mentally competent.
 - b. The EMT attending the patient has conducted a thorough medical examination and documented all pertinent findings and treatment in a pre-hospital care report.
 - c. The patient's condition is medically stable.
 - d. The patient agrees with non-transport.
 - e. An alternative method of transport to a medical care facility is available to the patient.
- 2. The following medical and injury conditions mandate consultation with on-line medical control or the patient's personal physician; otherwise EMS transport to a medical facility is indicated:
 - a. Unstable vital signs which may include orthostatic hypotension.
 - b. Altered consciousness or a history of loss of consciousness, or any acute onset neurological deficit. EXCEPT in the following instances:
 - i. <u>Hypoglycemia in patients with Diabetes Mellitus</u>: A patient with diabetes mellitus who is taking insulin has a documented episode of hypoglycemia with an altered level of consciousness which improves significantly with the administration of oral glucose or intravenous dextrose AND the hypoglycemic episode is consistent with the patient's compliance with medications or typical blood sugars.
 - ii. <u>Seizure in a patient with a Seizure Disorder</u>: If a patient with a known seizure disorder experiences a seizure that is consistent with his or her normal frequency of seizures or compliance with medications AND the seizure is typical for the patient. In such a case the patient does not necessarily require transport or on-line medical control providing that the patient is left in the care of a competent adult, self or other. The PHCR should contain clear documentation of the event.
 - c. Respiratory distress or pulse oximetry less than 90% (room air).
 - d. Patients over 40 years old with a complaint of chest pain consistent with heart or lung disease or of abdominal pain.
 - e. Severe headache or a high fever (>40 C/104 F) in any age group.
 - f. High risk of traumatic injury including such co-morbid factors as vehicular intrusion, injuries to others on scene, distance of fall or other concerns registered by the responding EMRs, EMTs and Paramedics.
 - g. No appropriate, timely, alternative means of transport to a medical facility is available.

Guidelines for Transporting ALS and BLS

BLS Guidelines

- 1. <u>If only BLS providers are on scene</u>, the personnel on scene will perform a primary and secondary evaluation, treatment and transport in the accordance with their agency standards and their specific scope of practice within these standing orders.
- If both BLS and ALS providers are on scene, the patient will be jointly evaluated by both ALS and BLS providers and if both providers agree that the patient care meets the BLS criteria, then patient care can be performed by a BLS provider. If care is initiated by an advanced EMT, the transfer of patient care from ALS to BLS will follows the procedures outline below in the "ADVANCED LIFE SUPPORT (ALS) to BASC LIFE SUPPORT (BLS) GUIDELINES" of this section.
- 3. Where EMTs licensed at the proper level are not on scene for patients whose condition requires advanced care, initial BLS transport will not be reasonably delayed, and ALS personnel will be activated as per the agency's protocol.
- 4. Any patient requiring change of care from the EMT-B to the EMT-P and/or EMT-I, after the patient was deemed appropriate for BLS Transport by both ALS and BLS providers, will be reported to the supervising physician.

ALS Guidelines

- 1. All outside requests for ALS assistance from BLS response personnel should occur after initial patient contact and evaluation by the responding agency.
- 2. EMT Basic; Use the following criterion to determine when to call for outside assistance Advanced Life Support (ALS) personnel.
- 3. EMT Intermediate; For criterion "a" through "e", initiate EMT Intermediate treatment protocol then determine the need for Paramedic based on criterion below.
 - a. Hypovolemic Shock
 - b. Respiratory Distress
 - c. Unconsciousness
 - d. Cardiogenic Shock
 - e. Trauma with altered mentation
 - f. Impending child birth or immediate post delivery
 - g. Seizures
 - i. 2 or more without clearing post-ictal
 - ii. Witnessed active Grand Mal lasting longer than 5 minutes.
 - h. Critical Burns
 - iii. Greater than 20% total body surface.
 - iv. Facial and/or oral burns
 - v. Inhalation injury

- 4. The following conditions alone do not represent an initial need for ALS care unless they lead to a criteria listed above:
 - a. Grand Mal Seizures followed by post-ictal
 - b. Dystonic Reaction
 - c. Stroke
 - d. DNR
 - e. Pain Management
 - f. Nose Bleed
 - g. Hypothermia
 - h. Hypertensive
 - i. Near Drowning
 - j. Nausea/Vomiting
 - k. Snake Bite
 - I. Spine Trauma
 - m. Syncope
- 5. If you are in doubt about a specific condition that is not addressed above, never hesitate to request ALS.

Transfer of Care from ALS to BLS Guidelines

- Care of a BLS patient may be transferred from an advanced EMT, (Paramedic or EMT-Intermediate), to an EMT- B. A BLS patient must have been evaluated by both an EMT- B and an advanced EMT. Further, both the advanced and the basic EMT must agree that the patient needs transport, but the patient condition does not meet ALS criteria listed above, and does not need any of the following treatment under these standing orders:
 - a. IV or IO access.
 - b. ALS procedure (Such as, but not limited to advanced airway, cardiac monitoring and/or chest decompression.)
 - c. ALS medication (For patients with severe pain and or nausea, for which the standing orders state should be treated by ALS medications, will not have treatment withheld from them in order to be considered stable.)
- 2. When a patient's care has been transferred from a Paramedic or EMT- I to an EMT-B, the EMT-B as the primary care provider must provide documentation in the PCR that the patient was evaluated and determined BLS in the SOAP (narrative) portion. This documentation must include that the patient was jointly evaluated and both EMT- B and Paramedic or EMT- I, (names listed) agreed that the patient was deemed to meet the BLS treatment criteria at the time of patient evaluation.
- 3. If the patient condition changes so that the patient requires ALS care will be transferred to an EMT-I or Paramedic without delay.

Documentation and Medical Record Requirements

- 1. All contacts with patients who are ill or injured must be documented on a pre-hospital care report, whether hand-written or computer-generated
- 2. All Pre-Hospital Care Report (PHCR) entries are to be dated and timed appropriately. Times are to be recorded as accurately as possible, however the EMT's primary concern is patient care, which will take precedence over timekeeping. Times should represent the course and duration of events. Times may vary from those of other clocks, which are not regularly and continuously time-synchronized.
- 3. The pre-hospital care form provides written documentation of patient condition and treatment for medical and legal purposes. It also adds to the continuity of patient care after arrival to the hospital.
- 4. Pre-hospital care reports are to be filled out completely with all pertinent information. The report is a record that reflects on you and the profession as a whole, so be concise, write legibly, spell correctly and use accepted terminology and abbreviations.
- 5. A patient's refusal of care or transport, transfer to another agency or person, on-line medical control communications, deviations from these standing orders or determination of death in the field will be documented on the pre-hospital care report.
- 6. In compliance with state regulations a complete pre-hospital care report must be left at the receiving hospital unless the patient's emergency department's nurse or physician receives an appropriate verbal report and gives verbal release, in which case a completed PHCR must be provided to the receiving hospital within 12 hours or the end of your shift, whichever is sooner.
- 7. If a non-treating EMT does not agree with the care given, it is that EMT's responsibility to discuss his or her reservations with his or her partner and resolve the problem. If the problem cannot be resolved, the non-treating EMT or paramedic shall write out a report documenting his or her reservations about the call. If there were any problems on the call with personnel or equipment which affected the patient outcome, fill out an incident report and forward to the supervising physician.
- 8. Pre-hospital care reports should be done in the SOAP format, or a consistent format that includes the following:

SUBJECTIVE

- Chief Complaint (why 911 was activated)
- History of Event or Mechanism of Injury (What happened prior to call)
- Relevant Past Medical History
- Significant and Pertinent Negatives

OBJECTIVE

- General Appearance, including scene description
- Vital Signs
- Head to Toe Exam
- Skin; Head, eyes, ears, nose, throat; Heart; Chest; Abdomen; Extremities; Spine;
- Neurological including level of consciousness or Glasgow coma score

ASSESSMENT

• What you think the patient's problem is based on your subjective and objective findings.

<u>PLAN</u>

- Protocols followed, on-line medical communications or deviations from these standing orders.
- Date and time interventions and changes in a patient's condition.

ALL CURRENT MEDICATIONS SHOULD BE BROUGHT TO THE EMERGENCY DEPARTMENT WITH THE PATIENT.

Equipment and Supplies

- 1. The minimum equipment and supplies are those required by the Oregon Health Authority, Emergency Medical Services Section for all Basic and Advanced Life Support Ambulances.
- 2. In addition, the supervising physician may require additional equipment and supplies in accordance with treatment protocols included in the standing orders. It shall be the responsibility of the supervising physician to provide pre-hospital providers with a rationale for employing equipment that exceeds the minimum standards of the Oregon Health Authority.
- 3. All transporting vehicles covered by these standing orders shall carry a copy of these standing orders.

Time on Scene

The purpose of this section is to set scene time limitations.

- 1. If at any time an EMT cannot provide or protect a patent airway to a patient, he/she is required to transport the patient immediately.
- 2. If at any time an EMT has been on the scene for more than thirty (30) minutes after patient encounter, and initiating emergency medical care, he/she is required to document the reason why on the pre-hospital care form.
- 3. For **TRAUMA** cases, time spent on the scene should be ten (10) minutes or less after extrication has been accomplished and the patient can be moved away from the site.
- 4. When more than 3 patients are involved, the 10 minute scene rule begins when late arriving units receive their patient.
- 5. Establishing an IV line in the field should not delay transport unless there is an immediate need for parenteral therapy; e.g., hypoglycemia, seizures, narcotic overdose, cardiac arrest or unstable dysrhythmias.

Ambulance Response

- 1. Ambulances will be driven in a manner consistent with public safety and the patient's condition as judged by the attending EMR or EMT.
- Lights and siren responses or transports may be appropriate if the transport time is significantly reduced and must be carefully balanced by the increased risk to the patient, EMRs, EMTs, Paramedics and general public of motor vehicle crashes associated with such responses.

Continuous Quality Improvement Plan

- 1. With the goal of providing a high level of patient care, it is important that all areas of prehospital care be monitored and improved upon where possible. With this in mind, all agencies shall participate in the Klamath County Continuous Quality Improvement Plan.
- 2. This plan provides a mechanism for review of selected pre-hospital care, with emphasis on critical care cases with high risk issues and procedures on a continuous basis. Conducting reviews of focused topics allow for intensive scrutiny of select topics, for a limited time.
- 3. When a potential issue is identified, it will be brought to the attention of the supervising physician and appropriate corrective action implemented. Hospital data may also be obtained to provide additional information. Each agency's QI plan will be reviewed at least annually.
- 4. Quality Assurance (retrospective) Reviews (review forms in Section T)
 - a. Field Delivery
 - b. Needle Decompression
 - c. Intraosseous Infusion
 - d. Cricothyrotomy (needle or percutaneous)
 - e. Cath Alert
 - f. Rapid Sequence Intubation (RSI)
 - g. Major MPS/MCI involving more than 2 agencies
 - h. Pre-hospital death in field
 - i. Random Review 3/100 (minimum 3 per month per agency)
 - j. As designated by the supervising physician:
 - i. Endotracheal Intubation
 - ii. Trauma System Activation
 - iii. Non-Transport
 - iv. Code 3 transport to Sky Lakes Medical Center
 - v. Contact with Medical Control
 - vi. Defibrillation/Cardioversion
 - vii. Prolonged scene time (greater than 30 minutes)

- k. In addition to patient care report reviews, the supervising physician may also utilize several other methods to monitor the EMS system for Quality Assurance.
 - i. Direct observation of EMR or EMT field performance.
 - ii. Monitoring and or review radio communications.
 - iii. Conducting post-run interviews.
 - iv. Conducting periodic case conferences.
 - v. Investigation of complaints.
- 5. Quality Improvement (prospective) Review as designated by the supervising physician.
 - a. IV Starts
 - b. RSI
 - c. Spinal Immobilization
 - d. Seizure
 - e. Poisoning/Overdose
- 6. Case Review Conferences will be held in the county at 4-8 week intervals. These will consist of case presentations and discussion, lecture/discussions or guest presentations relevant to EMS field work. Cases and topics for discussion will be selected by the supervising physician with input and suggestions from EMS and hospital personnel. Cases suggested for physician review or presentation at case review should be so designated and left with the supervising physician or flagged as such by the documenting EMT

Continuing Education and Conference Standards

- Continuing educational activities for EMRs, EMTs and Paramedics shall meet or exceed the minimum requirements of the Oregon Health Authority. Local programs for EMRs, EMTs and Paramedics shall include:
 - a. Case Review Conferences.
 - b. Multi-Disciplinary Trauma Conferences.
 - c. Special EMS Conferences organized by the Emergency and/or Education Departments of each hospital or by local EMS agencies.
- 2. As one of the state requirements for Oregon relicensure (OAR 847-035-0025-3), each EMT or EMR affiliated with a Klamath County EMS agency must have 2 hours contact per year (4 hours/2 year EMT relicensure cycle) with your agency's supervising physician. This contact time with your agency's supervising physician can be accomplished through Case Reviews, drill nights, EMS classes, EMS meetings, and other activities as designated by and provided by your agency's supervising physician.

Standing Order Review and Revision

- 1. There shall be at least an annual review of these standing orders by the supervising physicians with input from all concerned parties. A committee composed of the supervising physicians and other interested parties may be formed periodically for recommending revisions to the Standing Orders.
- 2. Education programs to update EMS providers as to pertinent changes in and additions to the standing orders shall be organized by the supervising physicians within a reasonable period of time after release of any revisions to the standing orders.

Inter-hospital Transfer Protocol

- <u>Policy</u> A patient is identified for inter-hospital transfer when an attending physician determines that more appropriate facilities or services are available, and consent for the transfer has been obtained from the patient or the family.
- 2. Procedure
 - a. The patient's sending (transferring) physician must contact the physician receiving the patient and the receiving hospital.
 - b. The patient must be stabilized to the best of the sending hospital's ability prior to transfer.
 - i. Patient is assured of an adequate airway and ventilation.
 - ii. Control of hemorrhage has been initiated.
 - iii. Patient's spine and fractures have been appropriately stabilized.
 - iv. An adequate access route for fluid administration is established and appropriate fluid therapy has been initiated.
 - c. Responsibility for arrangements and details of the transfer, including transportation, are those of the sending physician at the sending hospital. The receiving physician will be involved with the details of such a transfer to insure optimum care of the patient.
 - d. Proper equipment and trained personnel will be utilized to handle the problems specific to the patient's condition.
 - e. Instructions will be given to the personnel transferring the patient by the sending physician or nursing staff.
 - f. It is essential that a written record accompany the patient during the transfer including:
 - i. Patient information.
 - ii. History of injury or illness.
 - iii. Patient condition: vital signs, pertinent physical findings and neurological status.
 - iv. Treatment rendered, including medications and fluids.
 - v. Diagnostic findings: including laboratory, ECG, CT scan and x-ray films.
 - i. Pre-hospital report.

g. Medical Control during an inter-hospital transfer shall rest with the transporting unit's medical control or the receiving physician. In the event of a serious deterioration in the patient's condition the nearest appropriate medical facility will be utilized.

Use of Helicopter for Patient Transports

- 1. Aeromedical evacuation should be used when available and when it will decrease total patient transport time by 10-15 minutes or more.
- 2. The decision to use the aeromedical resource for transport rests with the ground EMS personnel. This decision may be made in conjunction with aeromedical personnel if necessary.
- 3. Only the highest medically trained EMS person on scene can cancel the helicopter and must document the reason on the patient care report.
- 4. Any person on scene working for a government sponsored agency can place the helicopter on standby or launch the helicopter. (Police, Fire, EMS, Forest Service, etc.) It is preferred that non-medical personnel place the helicopter on standby only first. If no EMS medical personnel arrive within ten minutes to perform a medical assessment and in their best judgment an air ambulance is needed, then the helicopter may be launched.
- 5. If any discrepancy or confusion exists on whether to launch/ use aeromedical transport, call medical control.

Trauma Considerations

- 1. Burns > 30% of total body surface area
- 2. Burns to the face with potentially impending airway obstruction
- 3. Full Trauma Activation. (based on current protocols) Patient must have pulse.
- 4. Discretionary Trauma (based on current protocols)

Medical Considerations

- 1. Respiratory arrest patient, subglottic airway or BMV, with spontaneous pulse.
- 2. STEMI confirmed by 12-lead EKG interpreted by EMT-P or Medical control
- 3. Localizing neurologic deficit indicative of CVA (onset less than 3 hrs prior) with normal blood sugar.
- 4. Any serious medical problem with unstable vital signs requiring rapid treatment or immediate surgery.

Contraindications and Precautions

- 1. In most cases, patients that are undergoing CPR should not be transported by helicopter.
- 2. In all cases, patients who are exposed to hazardous materials, and have not been decontaminated, will not be transported by helicopter.

Medical control is available 24 hours a day for questions or concerns when and if air transport is appropriate for the patient's condition. Consider putting the helicopter on STANDBY then contacting on-line medical control for advice.

Equipment List for a Non-Transporting EMS Unit

The following is a list of the minimum equipment suggested for a non-transporting EMS unit responding to EMS calls. The equipment is divided according to EMT service provided.

F/R	EMT B	EMTI	EMT P
4/4s	Everything to the left	Everything to the left	Everything to the left and
AED	1 cc syringes and	Assorted needles	2.5-8.0 ET tubes
Ammonia inhalant	Alcohol preps	ECG monitoring	3" 14 ga needle
B.V.M.	Broselow tape	IO kit	5cc-50cc syringes
B/P cuff	Capnometry	IV multi sets	ET secure ties
(regular, small,	CBG kit	IV needles	ET suction catheters
large)	supraglottic airway	IV tourniquets	Flutter valve
Back Board	Activated Charcoal	Nebulizer set	Macintosh blades (sizes 0-4)
Bite stick	Aspirin (ASA)	Razors	Manual defibrillator with pacemaker
Blankets	Epinephrine 1:1,000	Veni guards	Electrodes battery and paper
Burn kit	Oral glucose	Albuterol	Miller blades (sizes 0-4)
C-collars		Amiodarone	N/G-O/G tubes
Emergency blanket		Atropine	Spare ET bulbs/batteries
Emesis basin or bag	Optional	D50 (50% dextrose)	Stylet
EMS gloves	CPAP	Diphenhydramine	Acetaminophen
Hand disinfectant		Epinephrine 1:10,000	Adenosine
Head bed		Glucagon	Calcium Gluconate
Hot & cold packs		Ipratropium Bromide	Dopamine
Kling		Lidocaine 2%	Furosemide
K-Y jelly		Naloxone (Narcan)	Haloperidol
Nasal cannula		Nitro spray	Ondansetron
Non-rebreather		Normal saline	Oxymetazoline (Afrin)
O ₂ regulator		Optional:	Sodium Bicarbonate
OB-kit w/blanket		Lidocaine	
Occlusive dressing		EZ-IO	Optional
Pocket mask		Morphine	Percutaneous Cricothyrotomy
Portable suction		Fentanyl	Transport Ventilator
Ring cutter			Diazepam (Valium)
Safety glasses			Magnesium Sulfate
Set of NPAs			Morphine
Set of OPAs			
Soft restraints			

F/R	EMT B	EMTI	EMT P	
Splints			RSI	
Sterile water			Etomidate	
Stethoscope			Midazolam (Versed)	
Surgi pads			Succinylcholine	
Таре			Vecuronium	
Thermometer				
Trauma pads				
Trauma shears				
Triage Tags			Etomidate	
Triangular bandages			Midazolam (Versed)	Required of all
			Succinycholine	agencies
			Vecuronium	performing RSI

Klamath County Radio Frequencies

The Klamath County Emergency Services radio channels and frequencies shall allow them to communicate with Klamath County 9-1-1 on FireCom, their mutual aid partners, Sky Lakes Medical Center on the State Medical Network or MEDNET and the local Fire Defense Board Tactical Channel for their area of the County.

Klamath County EMS Approved Abbreviations

A-fib atrial fibrillation AAA abdominal aortic aneurysm ABD abdomen AMA against medical advice ASA aspirin **BBB** bundle branch block bm bowel movement **BP** blood pressure BS breath sounds BT bowel tones BVM bag valve mask °C Celsius/centigrade CA carcinoma CABG coronary artery bypass graft cc cubic centimeter C/C chief complaint CHF congestive heart failure CHI closed head injury cm centimeter cms circulation, movement & sensation CO carbon monoxide C/O complains of CO₂ carbon dioxide COA conscious, oriented, alert CBG capillary blood glucose COPD chronic obstructive pulmonary disease CP chest pain or cerebral palsy CSF cerebral spinal fluid CPR cardiopulmonary resuscitation CT computerized tomography CVA cerebral vascular accident

D/C discontinue dig digoxin DM diabetes mellitus DOA dead on arrival DOE dyspnea on exertion DTs delirium tremens Dx diagnosis EBL estimated blood loss ECG electrocardiogram EJ external jugular ET endotracheal ETOH ethyl alcohol f, \bigcirc female °F Fahrenheit FB foreign body Fe iron FHT fetal heart tones fib fibrillation Fr French Fx fracture ga gauge GCS Glasgow coma score G P gravida/parity GI gastrointestinal gm gram grav pregnancies/gravida GSW gunshot wound GU genitourinary GYN gynecological HEENT Head, Eyes, Ears, Nose, Throat H₂O water

H&P history & physical **HTN** hypertension Hx history IDDM insulin dependent diabetes mellitus IM intramuscular IO intraosseous irreg irregular IV intravenous J joules JVD jugular venous distention kg kilogram lb pound LLQ lower left quadrant L/min liters per minute LMP last menstrual period LOC level or loss of consciousness LUQ left upper quadrant m, ♂ male MAE moves all extremities mcg microgram meq milliequivalent mg milligram MgSO₄ magnesium sulfate MI myocardial infarction min minute(s) misc miscellaneous ml milliliter mm millimeter MOI mechanism of injury MS multiple sclerosis MVC motor vehicle crash N/A not applicable N&V nausea and vomiting Na sodium NaCl sodium chloride NC nasal cannula NG nasogastric NKDA no known drug allergies N/V/D nausea, vomiting, diarrhea neg negative NIDDM non-insulin dependent diabetes

mellitus NPA nasopharyngeal airway NPO nothing by mouth NRB non-rebreather NS normal saline NSR normal sinus rhythm NTG nitroglycerin N₂O nitrous oxide OG orogastric tube **OPA** oropharyngeal airway oz ounce O₂ oxygen P pulse or heart rate PAC premature atrial contraction para number of deliveries PAT paroxysmal atrial tachycardia PE physical exam peds pediatrics PERL pupils equal & reactive to light PCRF pre-hospital care report form PMH past medical history po by mouth pr per rectal prn as needed prox proximal PSVT paroxysmal supraventricular tachycardia pt patient PTA prior to arrival pulm pulmonary PVC premature ventricular contractions PVD peripheral vascular disease **R** respirations RLQ right lower quadrant R/O rule out **RSI** rapid sequence intubation RUQ right upper quadrant RX prescription or treatment rxn reaction SpO₂ pulse oximetry SL sublingual

S.O.A.P. subjective, objective, assessment, plan SOB shortness of breath SQ subcutaneous ST sinus tachycardia stat at once, immediately STEMI ST elevation MI kg kilogram lb pound LLQ lower left quadrant L/min liters per minute LMP last menstrual period LOC level or loss of consciousness LUQ left upper quadrant m, ♂ male MAE moves all extremities mcg microgram meq milliequivalent mg milligram MqSO₄ magnesium sulfate MI myocardial infarction min minute(s) misc miscellaneous ml milliliter mm millimeter MOI mechanism of injury MS multiple sclerosis MVC motor vehicle crash N/A not applicable N&V nausea and vomiting Na sodium NaCl sodium chloride NC nasal cannula NG nasogastric NKDA no known drug allergies N/V/D nausea, vomiting, diarrhea neg negative NIDDM non-insulin dependent diabetes mellitus NPA nasopharyngeal airway NPO nothing by mouth

NRB non-rebreather NS normal saline NSR normal sinus rhythm NTG nitroglycerin N₂O nitrous oxide OG orogastric tube **OPA** oropharyngeal airway oz ounce O₂ oxygen P pulse or heart rate PAC premature atrial contraction para number of deliveries PAT paroxysmal atrial tachycardia PE physical exam peds pediatrics PERL pupils equal & reactive to light PCRF pre-hospital care report form PMH past medical history po by mouth pr per rectal prn as needed prox proximal PSVT paroxysmal supraventricular tachycardia pt patient PTA prior to arrival pulm pulmonary PVC premature ventricular contractions PVD peripheral vascular disease **R** respirations RLQ right lower quadrant R/O rule out **RSI** rapid sequence intubation RUQ right upper quadrant RX prescription or treatment rxn reaction SpO₂ pulse oximetry SL sublingual S.O.A.P. subjective, objective, assessment, plan SOB shortness of breath

SQ subcutaneous	V/S vital signs
ST sinus tachycardia	WNL within normal limits
stat at once, immediately	WPW Wolff-Parkinson-White
STEMI ST elevation MI	x multiplied by
SVT supraventricular tachycardia	y/o years old
SZ seizure	Δ change
T temperature	@ at
tsp teaspoon	↑ increase
Tx traction or treatment	↓ decrease
URI upper respiratory infection	1° primary
UTI urinary tract infection	2° secondary
vag vaginal	Ψ psych
vo verbal order	

Klamath County Quality Assessment/Improvement Review Forms

These review forms are on the following pages:

Field Procedures Major MPS/MCI involving more than 2 agencies Random Review Pre-Hospital death in field

Klamath County Emergency Medical Services Quality Assessment/Improvement

Field Procedures

	Field Delivery		Agency:			
	Needle Decompression		Run #			_
	Intraosseous Infusion		Reviewer			
	EZ-IO Intraosseous		Review Da	te:	/	
			To Supervi Physician?	sing		
	Cricothyrotomy		Yes			
	Ranid Sequence Intuba	tion (RSI)	No For Case F	Review?	Yes	No
	Cath Alert		Teach	iing Point?		
Crite	ia	Acceptable	Not Acceptable	Not Applicable	Comment (required if Not Acceptable or Not Applicable)	
Agen comp	cy data & boxes lete?				,	
SOAI	P chart complete?					
Appro	opriate indication?					
Proce corre	edure followed ctly?					
Proce	edure successful? Yes No				# attempts	
Patie	nt response charted?					
Stand	ding Orders followed?					

Comments, Concerns & Suggestions:
Klamath County Emergency Medical Services Quality Assessment/Improvement

MPS/MCI involving more than 2 agencies

Agency: Run #	_ Reviewer _ Review D	 Date	<u> </u>	
To Supervising Physician For Case Review? Teaching Point:	n? Yes Yes	No No		_
Criteria	Acceptable	Not Acceptable	Not Applicable	Comment (required if Not Acceptable or Not Applicable)
MCI declared & announced?				
ICS established & appropriate?				
Triage appropriate?				
Treatment appropriate?				
Transport appropriate?				
Communications adequate?				
Standing Orders followed?				

Comments, Concerns & Suggestions:

Klamath County Emergency Medical Services Quality Assessment/Improvement

Random Review

Agency: Run #	Review	er Date	<u> </u>	
To Supervising Physician? Yes For Case Review? Yes Teaching Point:		No No		
Criteria	Acceptable	Not Acceptable	Not Applicable	Comment (required if Not Acceptable or Not Applicable)
Agency data & boxes complete?				
Scene time appropriate?				
SOAP chart complete?				
Appropriate vital signs?				
Assessment & Plan appropriate?				
Patient response charted?				
Report signed?				
Standing Orders followed?				

Comments, Concerns & Suggestions:

Klamath County Emergency Medical Services Quality Assessment/Improvement

Pre-Hospital Death in the Field Review

Agency:				_	Reviewe	r:	
Run #				_	Review [Date:	
To Supervising Physician?	ΠY	es		No			
For Case Review?	ΠY	es		No			
Teaching Point:							
Criteria _(circle all applicable)	Ac	cep	table	Ac	Not ceptable	Not Applicable	Comment(requir ed if Not Acceptable or Not Applicable)
Trauma Death			I				
Blunt trauma OR							
Penetrating head wound AND							
Pupils fixed & dilated?							
Dead on Arrival (DOA)							
Decapitation?							
Rigor mortis?							
Decomposition?							
Dependent livido?							
Do Not Resuscitate							
POLST form?							
On-line medical control?							
Resuscitation ceased							
On-line medical control?							

Comments, Concerns & Suggestions:



Patient Care Protocols

Section B

Abdominal Pain

<u>Subjective</u>

Pain can be gradual or rapid in onset, sharp, dull, colicky or constant with or without radiation. It may change with time or position. Guarding may be present. Nausea, vomiting, diarrhea, constipation, bloody emesis, bloody stools, urinary problems, abnormal menstrual cycle (late, spotting), fever, and dyspnea can occur. Past medical history, trauma, abnormal ingestions, medications, past surgeries, last menstrual cycle.

<u>Objective</u>

Diaphoresis, dyspnea, pallor, jaundice, hypotension, orthostatic BP changes, tachycardia. Normal, hypoactive, hyperactive or absent bowel sounds. Abdominal inspection can show distention, rigidness, bruising or a pulsatile mass. Emesis: type and amount, if visualized.

<u>Assessment</u>

Causes of pain may include peptic ulcers, appendicitis, diverticulitis, kidney stones, pelvic inflammatory disease, ectopic pregnancy, pancreatitis, cholecystitis, pyelonephritis, ovarian cyst, hepatitis, cancer, abdominal aortic aneurysm, peritonitis or bowel obstruction. Abdominal pain may be of cardiac origin.

EMR EMT	OxygenPosition of comfortNothing to eat or drink
AEMT	 One or two large bore IVs with crystalloid If unable to establish IV consider IO In suspected abdominal aortic aneurysm do not increase systolic BP above 90 mmHg
EMT- I Paramedic	Cardiac monitorMorphine or Fentanyl

Abdominal Trauma

Subjective

History of mechanism of injury: blunt or penetrating. Onset of symptoms from time of event. Abdominal pain, difficulty breathing, vomiting up blood. History of abdominal surgery. Blunt: speed of motor vehicle crash, steering wheel damage; passenger restraints; type of weapon if used; type of fall or blast. Penetrating: mechanism; type of weapon; distance from firing; caliber.

Objective

Examination may be normal. Patient may appear with pale and diaphoretic skin, conscious or unconscious. May have guarding and rigidity. Note injuries associated with traumatic event. Visualize bruising, distention, entrance and exit wounds to the abdomen. Evaluate vital signs frequently. Remember cyanosis and hypotension are late signs of shock.

<u>Assessment</u>

Diagnosis of abdominal trauma is made on the basis of the traumatic event history, palpation and visual examination.

Treatment

EMR	 Oxygen Keep patient warm Cover any open wound with dressing and moisten with crystalloid
AEMT	 One or two large bore IVs If unable to establish IV consider IO In suspected abdominal aortic aneurysm do not increase systolic BP above 90 mmHg
EMT-I	Cardiac monitor
Paramedic	Advanced airway management

Acute Dystonic Reaction

Subjective

Involuntary, unpleasant motor movements of the trunk, limbs or face following the administration of antipsychotic medications: Perphenazine (Trilafon), Trifluoperazine (Stelazine), Fluphenazine (Prolixin), Thiothixenxe (Navane), Haloperidol (Haldol) or anti-nausea medications: Promethazine (Phenergan), Droperidol (Inapsine), Prochlorperazine (Compazine) or Metaclopramide (Reglan).

Objective

Patient is awake and conscious, with extrapyramidal symptoms, usually distraught or anxious. Extrapyramidal symptoms often consist of small spasmodic movements or tics of the arms, legs, face or neck muscles with lip smacking, grimacing, tongue protrusion, eye movements or neck twisting.

<u>Assessment</u>

Acute dystonic reactions are distressing to the patient, but rarely life threatening. Patients may have had similar symptoms previously. Acute dystonic reactions may be mistaken for anaphylaxis or seizures. Patients with seizures, which may look somewhat similar, almost always have a loss or alteration of consciousness. Acute dystonic reactions may last for hours to days, whereas seizures usually last minutes.

EMR EMT	OxygenPatient comfort
AEMT EMT- I	IV with crystalloidIf unable to establish IV consider IO
Paramedic	Diphenhydramine

Patient may have history of recent crisis, emotional trauma, bizarre or abrupt changes in behavior. They may have suicidal ideas, alcohol or drug intoxication, toxic exposure, or recent head trauma. They may also have past history of psychiatric disorders, medical problems, medications and medication compliance. Inquire specifically regarding depression and thoughts of suicide.

Objective

Review their level of consciousness and orientation, look for signs of trauma, injury, ingestion or injection. Monitor vital signs, note odor on breath. Pill bottles or syringes at scene. Look for medical alert tags.

Assessment

Diagnosis may be difficult and should be determined by history, patient assessment and observations noted at the scene of event.

<u>Treatment</u>

EMR	 Attempt to establish rapport Do not leave patient alone Remove dangerous objects Oxygen
	Restrain, if necessary
EMT	 Check blood sugar Give oral glucose Keep calm and quiet Monitor vitals
AEMT EMT- I	 IV with crystalloid or saline lock Dextrose if indicated Consider Narcan If unable to establish IV consider IO
Paramedic	HaloperidolDiazepam or Midazolam

PROTECT YOURSELF AND OTHERS FIRST

Evaluate the time injury occurred, location and mechanism of injury. Consider the increased hemorrhagic potential if patient is on a daily aspirin regime, and/or Coumadin or other blood thinning medications. Find out if patient has previous injuries, medical history, bleeding disorders.

Objective

Identify the type of injury: amputation (partial or complete), laceration, abrasion and bruising. For closed injuries with swelling, and deformity consider following "Fractures and Dislocations" protocol. Neurovascular system and circulatory function may be compromised distal to the injury especially in partial amputations.

<u>Assessment</u>

Determine quantity of blood loss, if there is active bleeding, and evaluate for the presence of shock. Assess the patient to ensure they do not have any other injuries. Amputation and large lacerations may not be life threatening but may be psychologically traumatic for patient or family which can act as a distracting injury.

EMR EMT	 Control bleeding by direct pressure or if an extremity consider the use of a tourniquet Cold packs for closed injuries if neurovascular intact Oxygen target SpO2 between 94% and 99% If amputation (full or partial): Cover stump with sterile dressing soaked with crystalloid Splint partial amputations in position of function Wrap severed portion in crystalloid soaked sterile dressing, place in sealed plastic bag, place bag in ice water
AEMT	 One or two large bore IVs with crystalloid fluid to systolic BP equal to 90 mm Hg If unable to establish IV consider IO
EMT-I	 Morphine or Fentanyl (Not for abdominal injuries)
Paramedic	Midazolam or Diazepam (Not for abdominal injuries)

Anaphylaxis

Subjective

Evaluate for past history of allergic reactions. Method of exposure: oral, inhaled, dermal, percutaneous. Patient may have itching, throat tightening, shortness of breath, nausea, diarrhea, abdominal cramps, syncope.

Objective

Level of consciousness, wheezing, respiratory distress, stridor, hypotension, flushing, hives, edema, vomiting, diarrhea

Assessment

Anaphylaxis or systemic allergic reactions range from mild skin rash to shock. Anaphylactic reactions involve symptoms and at least one sign: diffuse skin reaction (flushing, itching or hives), shock, bronchospasm or angioedema (swelling) about the face, mouth and eyes. Mild systemic reaction may be managed with Diphenhydramine alone. Local reactions confined to one extremity are not systemic or anaphylaxis.

EMR	 Oxygen Remove allergen if possible Epinephrine IM (Epi Pen when trained)
ЕМТ	Epinephrine IMAirway management
AEMT	 Epinephrine IV or IM IV with crystalloid If unable to establish IV consider IO Albuterol
EMT-I	EpinephrineCardiac monitorDiphenhydramine
Paramedic	Advanced airway managementEpinephrine infusion

Barotrauma - Decompression Sickness and Arterial Gas Embolism

Subjective

Scuba diving accidents are not common. Remember to ask whether patient may have taken any type of breath from a scuba device while under water. Patients will complain of chest pain, dyspnea, dizziness, limb paresthesia or paralysis, weakness, itching, blotching rash, visual disturbance or loss, fatigue, joint soreness, abdominal pain or coughing spasms.

Objective

Patient may present with hypothermia, pulmonary edema, rash, crepitus, altered level of consciousness, coma, unequal pupils, wide pulse pressure, dysarthria, seizures, paralysis, decreased or absent breath sounds, apnea or cardiac arrest.

<u>Assessment</u>

It is essential to attempt to obtain a diving history or profile, including: time at which signs and symptoms occurred; type of breathing apparatus used; depth, number and duration of dives; aircraft travel following a dive; rate of ascent; previous decompression illness, use of medications or alcohol. Transportation to recompression chamber without delay is the optimum treatment; do not delay in field.

<u>Treatment</u>

EMR	 Supine if unconscious Left lateral Trendelenburg if conscious High flow oxygen
ЕМТ	Airway management
AEMT	IV with crystalloidIf unable to establish IV consider IO
EMT-I	Cardiac monitor
Paramedic	Advanced airway managementChest decompression

Treatment Over 18,000 feet

- Exhibits 1 or more signs/symptoms of decompression sickness
- High flow oxygen
- Transfer care over to flight doctor
- Get patient refusal of care and transport or
- Transport to Sky Lakes Emergency Room

Treatment Under 18,000 feet

- Treat as needed for a physiological emergency
- Transfer care over to flight doctor
- · Get patient refusal of care and transport or
- Transport to Sky Lakes Emergency Room

Burns

Subjective

Cause of burn: explosion, fire, radiation, inhalation, electrocution, lightning, chemical. Shortness of breath, airway compromise, loss of consciousness. Past medical history.

Objective

Extent of body surface area (BSA) involved (Rule of Nines on reverse side) and depth (superficial, partial or full thickness). Inhalation injury: soot or blisters around the mouth, singed nasal or facial hair, hoarseness, cough, carbonaceous sputum or respiratory distress. Associated injury.

Assessment

Lethal and hard to detect by-products of combustion include carbon monoxide and cyanide gas. Burns are usually very painful and anxiety provoking. Prevent further burn injury. Based on the mechanism of the burn be alert for other injuries from falls, explosion and inhalation. Suspected upper respiratory burns, consider early intubation.

<u>Treatment</u>

PROTECT YOURSELF AND OTHERS FIRST

EMR	 Oxygen Remove smoldering clothing and restrictive rings, bracelets, belts or straps Large burns (≥20% BSA) cover with dry sterile dressing. Avoid heat loss Small burns (<20% BSA) apply cool wet dressings Chemical burns flush area with large amounts of water to dilute and remove chemical
EMT	Airway management
AEMT	 One or two large bore IVs with crystalloid If unable to establish IV consider IO
EMT-I	Cardiac monitorMorphine or Fentanyl
Paramedic	 Advanced airway management Calcium Gluconate topically for hydrogen fluoride or hydrofluoric acid exposure or burns

The Rule of Nines





Parkland Formula For Fluid Replacement = TBSA burned(%) x Wt (kg) x 4mL. $\frac{1}{2}$ total Parkland Formula to be infused in first 8 hrs & $\frac{1}{2}$ in second 16 hrs. Wt (kg) x TBSA x 0.25ml = total to be infused for each hour of the first 8 hours

Cardiac- Chest Pain

Subjective

Patient may have chest or epigastric discomfort lasting minutes to hours – not seconds or days. Pain may radiate to neck, jaw, shoulder, inner arm or elbow, and may be associated with diaphoresis, nausea, vomiting, SOB, weakness or lightheadedness. Pain may be brought on by exertion or stress, and relieved by rest or nitroglycerine. Patient may have PMH of bypass surgery, angioplasty, angina, heart attack or myocardial infarction. Medications commonly include, but not limited to:

NITRATES: nitroglycerin, Nitrostat, Isordil, nitro patches, Imdur

CALCIUM CHANNEL BLOCKERS: Norvasc, Nifedipine, Procardia, Adalat, Diltiazem, Dilacor, Cardizem

BETA BLOCKERS: Propranolol, Inderal, Metoprolol, Lopressor, Toprolol, Atenolol, Sotalol (Betapace), Coreg

STATINS: Mevacor, Lipitor, Zocor, Pravachol, Lescol, Rosuvastatin, Crestor

Typical presentation anterior, lateral or inferior:

Chest pressure, ache, band, heaviness, crush or "elephant on the chest" lasting minutes to hours – not seconds or days; May radiate to left arm or jaw;

Typical presentation inferior:

Epigastric distress, pain or "indigestion"; Atypical presentations may include no discomfort.

<u>Objective</u>

Examination may be normal. Patient may appear ashen or sweaty. Patient may be hypotensive, bradycardic or have evidence of pulmonary edema (rales). Cardiac rhythm is monitored to detect the occurrence of ventricular or atrial dysrhythmias.

<u>Assessment</u>

Diagnosis of cardiac chest pain or (heart equivalent discomfort) is made on the basis of the patient's history. Other causes of chest pain include chest wall trauma, esophageal reflux, gastritis, peptic ulcer disease, pneumonia, pericarditis, pleurisy, pancreatitis, costochondritis, gall bladder disease, aortic dissection, aortic aneurysm, pulmonary embolism and anxiety.

EMR	Oxygen
ЕМТ	 Aspirin May assist with self-administration of patient's own nitroglycerin As available 12- lead ECG electronically communicated to medical control.
AEMT	 IV (20 or 18 gauge) with saline lock unless medications indicated Nitroglycerin If unable to establish IV consider IO
EMT-I	 Cardiac monitor Morphine or Fentanyl for pain (Fentanyl preferred)
Paramedic	12 lead ECG STEMI protocol, next page

Heart equivalent chest discomfort of \leq 12 hours duration

OR

Ventricular fibrillation or ventricular tachycardia converted to stable vital signs AND

Age 85 years or less.

Objective

Defibrillator 12 lead ECG without LBBB and meeting one of these 2 criteria:

- 1. Beginning at the J point, one of the following:
 - a. \geq 1 mm ST elevation in 2 contiguous lateral leads (I, aVL, V4, V5 & V6)
 - b. ≥ 1 mm ST elevation in 2 contiguous inferior leads (II, III, & aVF)
 - c. \geq 2 mm ST elevation in 2 contiguous chest leads (V₁, V₂, & V₃)

OR

2. Automatic ECG interpretation of "Acute MI Suspected"

If patient had ventricular fibrillation or ventricular tachycardia converted to perfusing rhythm with stable vital signs, then ECG must be at obtained after at least 5 minutes of the converted rhythm.

Assessment

For 12 leads ECGs captured by an EMT B or I and electronically communicated to the Sky Lakes ER the "Cath Alert" assessment will be made by medical control.

Acute myocardial infarction with ST elevation is usually best managed with rapid transport to a cardiac catheterization center for diagnosis and treatment.

EMR EMT AEMT	 Notify Sky Lakes Medical Center online medical control by means of electronically communicating the 12 Lead ECG they will advise you if patient meets criteria for "Cath Alert". Rapid transport to Sky Lakes Medical Center ER Leave a copy of the ECG with the ER
EMT- I Paramedic	 Notify Sky Lakes Medical Center Online Medical Control of "Cath Alert" and patient's cardiologist, if objective findings are present Electronically transmit the 12 Lead ECG if capable Use phone line to give patient's name and birth date. Report criteria for "Cath Alert" (ST elevation in millimeters)

Cardiac- Dysrhythmias

Subjective

Patient may have syncope, loss of consciousness, palpitations, chest pain, dizziness, and PMH of heart disease, current medications.

Objective

Vital signs, level of consciousness, pulmonary rates, peripheral perfusion. There will be a variation in the findings of the different dysrhythmias

<u>Assessment</u>

Cardiac dysrhythmias may need to be assessed differently based on the initial findings. Individual protocols for each of the following are available on the next pages.

<u>Treatment</u>

Treatment protocol for specific dysrhythmias will be based on patient's subjective and objective findings and specific rhythm. The treatment below is a baseline.

EMR	 Oxygen If indicated - CPR about 100 chest compressions per minute @ 30 compressions to 2 breaths; for 5 cycles or about 2 minutes. Minimize interruptions of CPR Pulse check after 5 cycles CPR Automatic External Defibrillation (AED) (before CPR if witnessed arrest)
EMT	 Airway management After an advanced airway give 1 breath every 6-8 seconds (≈ 8-10 breaths/minute)
AEMT	IV with crystalloidIf unable to establish IV consider IO
EMT- I Paramedic	 Cardiac monitor ACLS protocols Follow specific protocols for: Asystole/Pulseless Electrical Activity (PEA) Pediatric Bradycardia Bradycardia – Symptomatic Pediatric Tachycardia Tachycardia - Narrow complex Tachycardia - Wide complex V. fib/Pulseless V. tach (VF/VT)

Cardiac- Asystole / Pulseless Electrical Activity (PEA)

Subjective

Patient may have syncope but will have loss of consciousness.

Objective

- Unconsciousness, unresponsive, pulseless & apneic
- AED shows "non-shockable rhythm"
- Cardiac monitor shows asystole in 2 leads or pulseless electrical activity (PEA)

Assessment

Asystole or Pulseless Electrical Activity (PEA)

<u>Treatment</u>

EMR	 Oxygen CPR Automatic External Defibrillator (AED) as soon as available
ЕМТ	 Airway management Can terminate resuscitation efforts if all of the following are met: After 5 cycles of CPR and "No Shock Indicated", and ALS is over 20 minutes from the scene Online medical control consultation agrees with terminating resuscitation efforts Current underlying (without CPR) rhythm is printed and attached to the PCR
AEMT	IV with crystalloidIf unable to establish IV consider IO
EMT-I	 Epinephrine 1 mg IV or IO – repeat every 3-5 minutes If persistent Asystole, terminate resuscitation efforts after online medical control consultation
Paramedic	 Endotracheal intubation Consider transcutaneous pacing Sodium bicarbonate (1 mEq/kg IV or IO) if overdose with tricyclic antidepressants

Treatable Causes (treatments are scope of practice dependent)

5 Hs	5 Ts
Hypovolemia (IV fluids)	 Tension pneumothorax (needle decompression)
Hypoxia (ventilation)	Tamponade (pericardiocentesis)
Hydrogen ion - acidosis	Thromboembolism (pulmonary embolism)
Hyper-/hypokalemia	Thromboembolism (acute myocardial infarction)
Hypothermia	 "Tablets" - toxins/poisons/drugs tricyclic antidepressants, digitalis, beta-blockers, calcium channel blockers

Cardiac- Pediatric Bradycardia

Subjective

Age < 12 - 14 Altered level of consciousness Dizziness or lightheadedness Syncope Fatigue

Objective

Bradycardia (pulse < 60) with poor perfusion Altered level of consciousness Hypotension Diaphoresis Collapse

Assessment

Pediatric Bradycardia

Treatment

EMR	• Oxygen
ЕМТ	 CPR if P < 60 bpm and hemodynamically unstable 12 lead ECG
AEMT	IV or IO with crystalloidIf unable to establish IV consider IO
EMT- I	 Cardiac monitoring Epinephrine every 3 - 5 minutes IV or IO - 0.01 mg/kg = 0.1 ml/kg of 1:10,000
Paramedic	 Transcutaneous pacing If persistent Bradycardia, online medical control for Dopamine (2 - 20 mcg/kg/min) IV or IO or Epinephrine (0.1 - 0.3 mcg/kg/min) IV or IO

<u>Subjective</u>

Decreased level of consciousness Cardiac chest pain Dyspnea (shortness of breath)

<u>Objective</u>

Bradycardia (pulse < 60) Hypotension Diaphoresis Syncope

Assessment

Symptomatic Bradycardia <u>Treatment</u>

EMR EMT	OxygenCPR on pediatric patients only
AEMT	IV with crystalloidIf unable to establish IV consider IO
EMT-I	 Cardiac monitoring Atropine 0.5 mg IV – may repeat 5 times at 3-5 minutes intervals for a total dose of 3 mg
Paramedic	 Transcutaneous pacing Dopamine (5 - 20 mcg/kg/min)

Age 1 – 8 years Palpitations or rapid heart rate Altered level of consciousness Dizziness or lightheadedness Chest discomfort Dyspnea (shortness of breath) Poor feeding Fatigue

Objective

Tachycardia Infants, usually > 220 bpm Children, usually > 180 bpm Cyanosis Decreased level of consciousness Hypotension Diaphoresis Syncope

Assessment

Pediatric tachycardia <u>Treatment</u>

EMR	OxygenPosition of comfort
ЕМТ	• 12 lead ECG
AEMT	IV with crystalloidIf unable to establish IV consider IO
EMT-I	 Cardiac monitoring Vagal maneuvers, if patient stable with narrow complex tachycardia (rectal stimulation with a thermometer, ice water on face, or blowing through a straw – depending on age)
Paramedic	 IV or IO Adenosine if narrow complex (< 0.08 msec) 0.1 mg/kg (= 0.033 ml/kg) - max 6 mg - rapid IV or IO push if persistent, repeat once at 0.2 mg/kg (= 0.067 ml/kg) - max 12 mg - rapid IV or IO push Synchronized Cardioversion

Palpitations or rapid heart rate Decreased level of consciousness Cardiac chest pain Dyspnea (shortness of breath)

<u>Objective</u>

Tachycardia with a narrow complex Hypotension Diaphoresis Syncope

Assessment

Narrow complex tachycardia

EMR	OxygenPosition of comfort
EMT	• 12 lead ECG
AEMT	IV with crystalloidIf unable to establish IV consider IO
EMT-I	Cardiac monitoringVagal maneuvers, if patient stable
Paramedic	IV or IO AdenosineSynchronized Cardioversion

Palpitations or rapid heart rate Decreased level of consciousness Cardiac chest pain Dyspnea (shortness of breath)

<u>Objective</u>

Tachycardia with a narrow complex Hypotension Diaphoresis Syncope

Assessment

Wide complex tachycardia

Treatment

EMR	OxygenPosition of comfort
ЕМТ	12 lead ECG
AEMT	IV with crystalloidIf unable to establish IV consider IO
EMT-I	 Cardiac monitoring Amiodarone OR, (Lidocaine with online medical control only)
Paramedic	Synchronized CardioversionMagnesium

Cardiac- Ventricular Fibrillation/Pulseless Ventricular Tachycardia (VF/VT)

Subjective

Syncope & loss of consciousness

Objective

Unconsciousness, unresponsive, pulseless & apneic Cardiac monitor shows ventricular fibrillation or tachycardia. AED shows "shockable rhythm".

Assessment

Ventricular fibrillation or pulseless ventricular tachycardia (VF/VT) <u>Treatment</u>

EMR	 Automatic External Defibrillation (AED) CPR Oxygen
ЕМТ	Airway management
AEMT	IV with crystalloidIf unable to establish IV consider IO
EMT- I	 Defibrillation with single shock at maximum manufacturer recommended energy (biphasic 200 joules or monophasic 360 joules) (1st pediatric shock 2 J/kg) Epinephrine 1 mg IV or IO – repeat every 3-5 minutes Defibrillation with single shock at maximum manufacturer recommended energy (biphasic 200 joules or monophasic 360 joules) (Subsequent pediatric shocks 4 J/kg) Amiodarone 300 mg IV or IO push. May give an additional 150 mg IV or IO once in 3-5 minutes. OR With online medical control only. Lidocaine 1.5 mg/kg. IV or IO push May repeat 0.75 mg/kg every 5-10 minute. Max dose = 3 mg/kg.
Paramedic	 Endotracheal intubation Sodium bicarbonate (1 mEq/kg IV or IO) if overdose with tricyclic antidepressants) Magnesium sulfate (1 - 2 grams in 10 ml saline IV or IO push) if torsades de pointes

Patient may experience sudden onset of focal neurological deficits or an alteration in consciousness. Symptoms can occur alone, in combination, increase, decrease or be maximal severity at onset. These may include headaches, disturbances in consciousness, nausea and vomiting, ataxia, visual loss, diplopia, aphasia, paralysis, slurred speech, dysphasia, seizure, coma and death. Patients with these symptoms of less than 6 hours duration may be candidates for thrombolytic (TPA) or other interventional therapy. Patient may have a history of stroke or transient ischemic attack (TIA), or may be taking medication for hypertension or a host of medications for other medical conditions.

Objective

Patient may be unconscious and level of consciousness should be reevaluated on a regular basis. Neurological exam findings may change with time. Pupils may be unequal and reactivity to light may vary. Patient assessment should include the evaluation of speech, language, motor responses and sensations. Limbs should be evaluated for equal strength and motion. Nuchal rigidity (inability to flex the head forward) can be checked, but this is a late sign. Monitor blood pressure, pulse, respirations, cardiac rhythm and blood sugar.

<u>Assessment</u>

Diagnosis of stroke (CVA) is made on the basis of patient history and physical exam. Other causes of an altered mental status can cause trauma, hypoglycemia, seizure disorder, psychiatric disorder and drug ingestion.

- F: Facial Droop
- A: Arm Drift
- S: Speech slurred or abnormal
- T: Time: onset of symptoms less than 6 hours

Treatment:

EMR	 Oxygen STROKE ALERT if positive F.A.S.T and no convulsive or seizure activity witnessed or reported
ЕМТ	 Check blood sugar Oral glucose if airway is protected Airway management
AEMT	 IV with crystalloid If unable to establish IV consider IO IV Dextrose
EMT-I	Cardiac monitor
Paramedic	Advanced airway management

Chest Trauma

Subjective

History and mechanism of injury: blunt or penetrating. Patient may have onset of symptoms from time of event, such as chest pain, difficulty breathing, coughing up blood, and may have PMH of chest surgery.

Blunt: speed of motor vehicle crash; steering wheel damage; passenger restraints; type of weapon if used; type of fall or blast.

Penetrating: mechanism; type of weapon; distance from firing; caliber.

Objective

Patient may appear cyanotic, pale, with cool and clammy skin with respiratory distress. Paradoxical chest movement, subcutaneous air, decreased or absent breath sounds, obvious open or closed chest injuries. Patient may also exhibit distended neck veins, tracheal shift or hemoptysis, tachycardia, narrow pulse pressures or hypotension.

Assessment

Diagnosis of chest trauma will be based on patient history, mechanism of injury and physical findings. Do not overlook other potential injuries; head, spine, abdomen or extremities.

EMR	 High flow oxygen Cover open chest wounds with occlusive dressing Spinal immobilization
EMT	Airway management
AEMT	 One or two large bore IVs with crystalloid If unable to establish IV consider IO
EMT-I	Cardiac monitor
Paramedic	Advanced airway managementChest decompression

Child Birth- Care of the Newborn

Subjective

This is a child at birth immediately following precipitous labor or home delivery. Mother may have complications with pregnancy, due date, multiple births, past medical history, medications, drug or alcohol usage.

Objective

Respiratory rate and effort, grunting, use of accessory muscles, meconium, skin color, heart rate, muscle tone, multiple births.

Assessment

Most newborns will quickly respond to stimulation through gently drying and placement upon mother's chest or abdomen and encouragement to nurse.

<u>Treatment</u>

EMR EMT	 Remove wet blankets or towels and dry infant. Cover infant, including head, with dry blanket or towel to maintain body temperature.
AEMT	• Suction mouth, then nose with bulb syringe for copious secretions or
EMT-I	 Obvious obstructions. Blow-by oxygen for respiratory difficulty or cyanosis
Paramedic	 Assess one and five minute APGAR

APGAR SCORING

ITEM	0	1	2	
Appearance	cyanotic	pink with blue extremities	all pink	
Pulse	absent	<100/min.	>100/min.	
Grimace	none	grimace	sneeze or cough	
Activity	limp	some flexion	active motion	
Respirations	none	slow or irregular	good cry	

Consider the gravida, parity, due date, recent vaginal bleeding, problems with this or prior pregnancies, known multiple births, drug or ETOH abuse, past medical history. Contractions - onset, frequency, ruptured membranes, urge to push, pain location, type. Ask mother what her BP has been.

<u>Objective</u>

Assess Vital signs, fetal heart tones (LLQ, RLQ, over bladder), and frequency of contractions. Respecting privacy, inspect perineum for crowning or bulging, vaginal fluid, bleeding, meconium, abnormal presentation.

<u>Assessment</u>

Childbirth is a natural event and usually is uncomplicated. If you suspect a complicated delivery, refer to the appropriate protocol and request additional resources. If you suspect an uncomplicated delivery and imminent birth is not present, transport mother on left side. If you suspect an impending birth, follow the protocol below.

EMR EMT	 Oxygen Position of comfort Open OB pack and set up a work area preparing for two patients Assist with delivery of head applying gentle pressure and continue to support head When head delivers, feel around neck for nuchal cord, if present gently slip cord around head Suction mouth, then nose with bulb syringe Supporting head, assist delivery of anterior shoulder and then the rest of the body Keep baby level with placenta until the cord is clamped Clamp cord using 2 clamps spaced 6-8 inches from baby's body and cut cord between clamps Inspect perineum for tears. Apply direct pressure with gauze pad to any bleeding. Do not pack inside of vagina Let placenta deliver normally and transport it to hospital with the mom and baby After placenta delivers, massage uterus by rubbing abdomen firmly
AEMT	 IV with crystalloid If unable to establish IV consider IO
EMT- I Paramedic	Cardiac monitor

Child Birth- Newborn Care – Complications







Child Birth- Post-Partum Hemorrhage

Subjective

Gravida, parity, delivery time and date, quantity of vaginal bleeding, prior problems with pregnancy, drug or ethanol use, past medical history, medications.

Objective

Patient may have hypotension, tachycardia. Be sure to estimated blood loss at scene, assess active bleeding, tears in perineum, and record delivery of intact placenta.

<u>Assessment</u>

Immediate (first 24 hours) post-partum hemorrhage is usually due to poor uterine muscle tone, cervical, or perineal tears. Late post-partum hemorrhage (7-10 days) is usually from presence of retained placental parts. If immediately post-partum, the first priority is delivery of the placenta.

EMR EMT	 High flow oxygen External uterine massage Allow infant to nurse to stimulate uterine contractions or have patient stimulate her own nipples Apply direct pressure to active external perineal bleeding
AEMT	 One or two large bore IVs with crystalloid If unable to establish IV consider IO
EMT-I	Cardiac monitor
Paramedic	Oxytocin

Child Birth- Breech Delivery

Subjective

Known breech position, gravida, parity, history of breech delivery, due date any complications during pregnancy, drug or alcohol use, past medical history.

Objective

Note the presenting part, frequency of contractions, and presence of meconium.

<u>Assessment</u>

Transport without delay to closest hospital; be prepared to assist in delivery.

EMR EMT	 Place mother on high flow oxygen Place mother supine or in Trendelenburg position If birth is imminent, allow mom to push, do not pull baby Support delivered baby and extremities on your hand and arm If head does not deliver place a gloved hand into the vagina and form a V around the baby's head and mouth to create an air passage. Maintain this position until birth Consider Mauriceau maneuver to help deliver head (see image below)
AEMT	IV with crystalloidIf unable to establish IV consider IO
EMT- I Paramedic	Cardiac monitor



Child Birth- Pre-Eclampsia/Eclampsia

Subjective

Headache, decreased urinary output, weight gain, increased edema, visual disturbances, abdominal pain, currently may be on bed rest, seizures.

Objective

Hypertension, pulmonary edema, cyanosis, hyperreflexia, seizures, coma, usually past 20 weeks gestation.

Assessment

Pre-eclampsia is a pregnancy related condition involving hypertension, proteinuria and edema. When seizures occur it is eclampsia. Pre-eclampsia and eclampsia used to be called toxemia. Suspect eclampsia in third trimester pregnant patients who are seizing. These patients will need magnesium sulfate to help reverse the eclampsia and diazepam (Valium) to control seizures.

<u>Treatment</u>

The definitive treatment for pre-eclampsia and eclampsia is delivery.

EMR EMT	 High flow oxygen Lay mother on left side Keep environmental stimulation at a minimum 					
AEMT	IV with crystalloidIf unable to establish IV consider IO					
EMT-I	Cardiac monitor					
Paramedic	 Advanced airway management Magnesium Diazepam 					

Coma

Subjective

Coma may occur in patients experiencing headache, seizures, confusion, trauma, or prior medical or psychiatric problems, such as diabetes, epilepsy, CVA.

Objective

Patient will be unconscious and unresponsive. Vital signs may be normal. Check for signs of trauma, injury, ingestion or injection. Check for medical alert tag. Evidence at scene of pill bottles, syringes or odor within the house. If there are multiple patients, consider environmental poisoning.

<u>Assessment</u>

Diagnosis of coma will be made by the patient's level of consciousness. There may be no obvious cause, injury or reason for the patient's condition.

EMR	High flow oxygen				
ЕМТ	Check blood sugarAirway management				
AEMT	 One or two large bore IVs with crystalloid If unable to establish IV consider IO Dextrose Naloxone 				
EMT-I	Cardiac monitor				
Paramedic	Advanced airway management				

Do Not Resuscitate

Subjective

Some patients may decide in advance that heroic life saving measures would not be beneficial or desirable. This information must be obtained prior to withholding life sustaining or resuscitative care from the patient. The information must be in the form of a POLST form (Physician Orders for Life-Sustaining Treatment) or other recognized Advanced Directives signed by patient and physician.

Objective

Patient is unresponsive, apneic, and pulseless and does not meet death in the field criteria. Or patient has end of life signs of such as decreasing consciousness, impending respiratory or cardiac failure with death being imminent.

Assessment

The decision for a Do Not Resuscitate (DNR) order will be transmitted to EMS field personnel in Klamath County, Oregon via the POLST form or other recognized form signed by patient and physician. These are the only acceptable DNR instructions in Klamath County.

HIPA/	A PERMITS DISCLOSURE TO HEAL	TH CARE PRO	FESSIONA	LS & ELE	CTRONIC REG	SISTRY AS I	NECESSARY FOR TREATME	INT
	Oregon POLST [™]							
	Portable Orders for Life-Sustaining Treatment*							
Follow	these medical orders until or	iers change.	Any sec	tion not	completed	implies fu	Il treatment for that sec	tion.
Patient L	ast Name:	Suffix: Pa	itient First	Name:		Pat	tient Middle Name:	
Preferred	i Name:	Date of Birth: /	(mm/dd/y	ууу)	Gender:	F	MRN (optional)	
Address:	(street / city / state zip):							
Δ	CARDIOPULMONARY RE	SUSCITAT	ION (CF	PR):	Unrespons	sive, puls	eless, & not breathin	g.
Check One	Attempt Resuscita	ation/CPF	tollow o	rders in	Do Not	Attemp	ot Resuscitation/	DNR
D		Shary arrest,	iont has		ond is broa	thing		
в		No. II pat		puise a	anu is brea	d auffaria	a through the use of on	
Check One	 Comfort measures only. Provide treatments to relieve pair and suffering through the use of any medication by any route, positioning, wound care and other measures. Use oxygen, suction and manual treatment of airway obstruction as needed for comfort. <i>Patient prefers no transfer to hospital for life-sustaining treatments.</i> Transfer if comfort needs cannot be met in current location. Treatment Plan: Provide treatments for comfort through symptom management. Limited Treatment. In addition to care described in Comfort Measures Only, use medical treatment, antibiotics, IV fluids and cardiac monitor as indicated. No intubation, advanced airway interventions, or mechanical ventilation. May consider less invasive airway support (e.g. CPAP, BiPAP). Transfer to hospital if indicated. Generally avoid the intensive care unit. Treatment Plan: Provide basic medical treatments. Full Treatment. In addition to care described in Comfort Measures Only and Limited Treatment, use intubation, advanced airway interventions, and mechanical ventilation as indicated. Transfer to hospital and/or intensive care unit if indicated. Full Treatment. In addition to care described in Comfort Measures Only and Limited Treatment, use intubation, advanced airway interventions, and mechanical ventilation as indicated. Transfer to hospital and/or intensive care unit if indicated. 						on.	
							nent, ons, s fer	
<u> </u>	DOCUMENTATION OF W	HO WAS I	PRESEN	T FOR	Discuss	ION See	e reverse side for add'l i	info.
Chaote	Patient] Surrog	ate for patie	ent with d	evelopmental disabilitie	es or
All That	at Parent of minor significant mental health condition (Note:				ndition (Note: Special			
Apply	Person appointed on advance directive						vritten annointment)	
	Court-appointed guardia	n	_	a i telativ	re or menu	(minour v	written appointment)	
	Discussed with (list all nam	es and relati	ionship):					
	PATIENT OR SURROGAT	E SIGNATI	URE					
D	Signature: recommended		Name (p	print):		1	Relationship (write "self" if p	atient):
	This form will be sent	to the POLST	Registry	unless th	ne patient wis	hes to opt	out, if so check opt out bo	
E	ATTESTATION OF MD / DO / NP / PA / ND (REQUIRED)							
Must Print	By signing below, I attest that these medical orders are, to the best of my knowledge, consistent with the patient's current medical condition and preferences.							
Name, Sign &	Print Signing MD / DO / NP / PA /	ND Name: rec	quired	Signer F	hone Number	r:	Signer License Number: (or	ptional)
Date	MD / DO / NP / PA / ND Signature	e: <u>required</u>		Date: <u>re</u>	quired	"Signed" m signature or medical prac	eans a physical signature, elect verbal order documented per s ctice. Refer to OAR 333-270-00	stronic standard 130
© CENTER	SEND FORM WI SUBMIT COPY OF BOTH SIDE FOR ETHICS IN HEALTH CARE, OREGO	TH PATIENT S OF FORM Health Science U	WHENEV TO REGIS	/ER TRAI STRY IF HSU)	NSFERRED (PATIENT DI	OR DISCH D NOT OP	ARGED T OUT IN SECTION D	2019
HIPAA PERMITS DISCLOSURE TO HEALTH O	CARE PROFESSIONA	LS & ELECTRO	NIC REGIST	RY AS NECES	SARY FOR TREATMENT			
--	--	--	--	---	--			
Information Regarding POLST	P	ATIENT'S N	AME:					
 The POLST form is: Always voluntary and cannot be requination. A medical order for people with a series of a series of wishes for emergency. A form that can be changed at any time. NOT an advance directive, which is All appoint a surrogate/health care decision. 	ired ious illness or frai treatment in one's with a health care .SO recommended maker)	Ity current state o professional, t (an advance o	f health (if s to reflect ne directive is t	something ha w treatment the appropria	ppened today) wishes te legal document to			
	Contact Inform	ation (Optio	onal)					
Emergency Contact:		Relation	nship:		Phone Number:			
Health Care Professional Informatio	n							
Preparer Name: Pr	eparer Title:	Phone Numb	er:	Date Prepar	ed:			
PA's Supervising Physician:	70	Phone Numb	er:					
Primary Care Professional:		· · · ·						
Direc	tions for Health	Care Prof	essional	5				
 An order of CPR in Section A is incompatible Photocopies, faxes, and electronically signe Verbal / phone orders from MD/DO/NP/PA/I For information on determining the legal dec A person with developmental disabilities or in the POLST form; refer to <i>Guidance for Heal</i> Dregon POLST Registry Information Health Care Professionals: Send a copy of both sides of this POLST form to the Oregon POLST Registry unless the patient opts out. The following must be completed: Patient's full name Date of birth MD / DO / NP / PA / ND signature 	a with an order for Co clotoms are legal and ND in accordance with significant mental heat th Care Professionals Registry Contact In Toll Free: 1-877-367 Fax or eFAX: 503-4 www.orpolstregistry polstreg@ohsu.edu Oregon POLST Reg 3181 SW Sam Jack Mail Code: BTE 234 Portland, OR 97239	mfort Measures I valid. h facility/commu- apacitated pati- lith condition re- at www.oregor nformation: 7-7657 18-2161 .org gistry son Park Rd.	Inity policy of ents, refer to quires additi polst.org. If addr confirmat	Patiess is listed of four weeks	t be accepted in Registry ed to the Registry. 5 - 127.660. ation before completing ents: on front page, mailed for delivery. ID STICKER HERE:			
Updating POLST: A POLST Form only	needs to be revise	ed if patient t	reatment p	references l	have changed.			
This POLST should be reviewed periodically, in • The patient is transferred from one care sett • There is a substantial change in the patient's If patient wishes haven't changed, the POLST F	cluding when: ing or care level to an health status. form does not need to	other (including	upon admis	ssion or at disc	tharge), or to the Registry.			
A person with capacity, or the valid surrogat For paper forms, draw line through sections If included in an electronic medical record, f Regardless of paper or ePOLST form, send	e of a person without A through E and writ ollow your systems el a copy of the voided	capacity, can v e "VOID" in larg POLST voiding form to the PO	void the form le letters if P procedures. LST Registr	and request a OLST is replaced on the second	alternative treatment, ced or becomes invalid, less patient has opted ou			
For permission to use the copyrighted form con Information on the Oregon POLST Program is a	tact the OHSU Cente available online at ww	er for Ethics in H ww.oregonpols	iealth Care : t.org or at p	at polst@ohsu olst@ohsu.ee	.edu or (503) 494-3965. du.			
SEND FORM WITH PATIENT WHEN	EVER TRANSFER	PED OR DISC	HARGED	SUBMIT COR	Y TO DECISTBY			

Epistaxis (Nosebleed)

Subjective

Note the amount of blood loss, trauma, recent upper respiratory tract infection, intranasal drug use, current medications (aspirin, Coumadin), self-treatment, history of nosebleeds, nausea.

Objective

Check for bloody or clear fluid from ears to indicate skull injury. Evaluate for airway compromise, hypotension, hypertension and trauma.

<u>Assessment</u>

Most nosebleeds occur on the anterior septum from one side only and will stop spontaneously or with direct pressure if applied appropriately. Patients may be very anxious, particularly if the bleeding is persistent. The risk of significant blood loss is generally small. Bleeding from the posterior nose is often much more serious, but also very unusual. Medical intervention is usually required for posterior bleeds.

EMR EMT	 Calm patient Have patient blow nose to expel clots and apply direct pressure: pinch soft part of nose, distal nasal septum, for ten minutes or until bleeding stops
AEMT EMT- I	IV with crystalloidIf unable to establish IV consider IO
Paramedic	Oxymetazoline (Afrin)

Fractures & Dislocations

Subjective

Patient may have history of trauma and mechanism of injury, localized pain, tenderness, and swelling, loss of sensation or motion.

Objective

Patient may have swelling, deformity, angulation, discoloration, crepitus, and loss of motion or guarding. Open wound or exposed bones. Arterial compromise demonstrated by cool extremity, loss of pulses or loss of sensation.

Assessment

Diagnosis of a suspected fracture or dislocation is based on the patient's history, mechanism of injury and physical findings. Other causes may be a strain or sprain. Evaluate for other trauma.

EMR EMT	 Oxygen Dressing to open wounds Immobilize, splint, elevate, apply ice
AEMT	IV with crystalloidIf unable to establish IV consider IO
EMT-I	Cardiac monitorMorphine or Fentanyl
Paramedic	DiazepamMidazolamKetamine

Head Trauma

Subjective

Patient may have history of trauma and the mechanism of injury, have changes in consciousness. Protective devices may have been worn, such as safety belts or helmets. Patient may complain of headache, nausea, vomiting, visual changes, numbness, tingling or paralysis. Obtain a thorough medical history.

Objective

Assess level of consciousness for alteration, clear or bloody discharge from ears or nose. Cushing's triad: Bradycardia, hypertension and abnormal respirations. Assess pupil size and reactivity to light. Assess for skull or facial lacerations or fractures and further injuries.

<u>Assessment</u>

Head trauma may produce lacerations, fractures or brain injury. Alterations in the level of consciousness may be due to other medical conditions.

EMR	OxygenSpinal immobilizationPatient restraint
EMT	Airway management
AEMT	IV with crystalloidIf unable to establish IV consider IO
EMT-I	Cardiac monitor
Paramedic	 Advanced airway management Versed or Haldol for chemical restraint

Heat Illnesses

Subjective

Patient may or may not have been in hot environment, exercised, rate of onset may be fast or slow, underlying medical conditions can complicate or heat may effect current medications. Headache, nausea, cramps, dizziness, generalized weakness.

Objective

Core temperature may be normal or elevated, and the skin temperature may be normal, cool and wet, or hot and dry. Blood pressure normal or low. Patient may have PMH of altered level of consciousness or seizures.

Assessment

Heat illness may range from heat cramps, treated with removal from heat, to heat exhaustion, treated with hydration, to heat stroke where the body's ability to maintain normal temperature fails. Heat stroke is diagnosed on the basis of hot environment, body temperature greater than 104°F and neurological abnormalities including an altered mental status. Patients with heat stroke need to have active cooling measures begun immediately.

EMR	Remove patient from heatHeat cramps, treated with removal from heat
ЕМТ	OxygenActive cooling if heat stroke
AEMT	 IV with crystalloid If unable to establish IV consider IO Heat exhaustion, treated with hydration
EMT- I Paramedic	Cardiac monitor

Hyperglycemia

Subjective

Patient may have altered level of consciousness, rapid or slow onset, confusion, weakness, dizziness, abdominal pain, vomiting, frequent urination, recent weight loss, or presence or absence of hunger and thirst. Often with a history of diabetes, which may be treated with insulin or oral hypoglycemic medication: Glyburide (Diabeta, Micronase), Glipizide (Glucotrol), Tolbutamide (Orinase), Metformin (Glucophage), chlorpropamide (Diabinase). Patients may have run out of their diabetes medication, especially insulin. Patients may have an acute underlying medical illness, such as infection, MI, or viral syndrome. Some patients may first be discovered to have diabetes on an initial presentation of hyperglycemia.

Objective

May have medical alert tag

Level of consciousness: confusion, disoriented, combative, comatose, or unresponsive. **Skin**: pale, moist or warm, dry and pink, or signs of dehydration.

Breathing: normal, rapid and deep (Kussmaul respirations), or fruity odor (due to ketones). **Pulse**: normal or elevated.

Blood pressure: hypotensive or normal

Chemstrip usually more than 300 mg/dl

Assessment

Patients with hyperglycemia (blood sugar more than 300-400, often have 600-800) often have been sick for one to several days with vomiting and may have rapid, deep breathing (Kussmaul respirations), warm, dry, pink skin and are usually dehydrated. The initial problem is usually severe dehydration, so the initial treatment is with crystalloid, not insulin.

EMR	• Oxygen
ЕМТ	Check blood sugar
AEMT	IV with crystalloidIf unable to establish IV consider IO
EMT- I Paramedic	Cardiac monitor

Hypertensive Emergencies

Subjective

Patient may be symptomatic or have headache, blurred vision, nausea or vomiting, confusion, chest pain or dyspnea. Patient may have a history of hypertension and may be on medication to control blood pressure (diuretics, beta blockers, calcium channel blockers, ACE inhibitors). If patient is pregnant, think pre-eclampsia.

Objective

Hypertensive emergencies may demonstrate confusion, coma, nuchal rigidity, pupillary changes, irregular respirations (Cheyne-Stokes), pulmonary edema, chest pain, seizures, and/or nosebleeds.

<u>Assessment</u>

Hypertension itself is rarely a medical emergency. Blood pressure must always be measured on several occasions before treating hypertension. Persistent blood pressures greater than 240/140 and altered mental status, pulmonary edema or chest pain may warrant treatment of the blood pressure. Elevated blood pressure is often the body's response to maintain adequate blood flow to the brain; lowering the patient's blood pressure may worsen the patient's mental status or result in a stroke.

EMR EMT	• Oxygen
AEMT	IV with crystalloidIf unable to establish IV consider IO
EMT-I	Cardiac monitor
Paramedic	Nitroglycerin

Subjective

Patient may have altered level of consciousness, weakness, sweating, shakiness, seizure. Usually occurs with a history of diabetes treated with insulin, sometimes treated with oral medications - Glyburide (Diabeta, Micronase), Glipizide (Glucotrol), Tolbutamide (Orinase), Metformin (Glucophage), chlorpropamide (Diabinase). Hypoglycemia may also occur in newborns, those with inadequate nutrition, or over- or prolonged exertion. Ask about recent illness, last meal, last insulin administration, oral hypoglycemic medications.

Objective

Possible medical alert tag

Level of consciousness: confusion, disoriented, combative, comatose, or unresponsive. **Skin**: often pale, cool, and clammy.

Breathing: normal. Pulse: normal or elevated.

Blood pressure: hypotensive or normal.

Chemstrip: less than 80 mg/dl in an adult or child, 60 mg/dl in an infant up to 1 year of age, 40 mg/dl in a newborn less than 8 weeks aged.

<u>Assessment</u>

Patients with hypoglycemia have usually been sick for a short period of time, minutes to hours. They may be confused or unconscious and their skin is usually cool and clammy. The immediate treatment is with glucose which should provide a significant improvement within minutes.

Glucose	50% Dextrose	D10 Dextrose
60-69	16 MI	80mL
50-59	20 MI	100mL
40-49	24 mL	120mL
30-39	28 mL	140mL
20-29	32 mL	160mL
10-19	36 mL	180mL

EMR	OxygenOral glucose if no airway risk
EMT	Check blood sugar
AEMT	 IV with crystalloid If unable to establish IV consider IO D50/D10 titrate to consciousness Glucagon
EMT- I Paramedic	Cardiac monitor

Hypothermia

Subjective

Assess for body heat loss due to environmentally cool or wet conditions. Check PMH as underlying medical illnesses may complicate hypothermia or be complicated by hypothermia. Note any current medications taken or alcohol consumption.

Objective

<u>MILD</u> (94-97°F, 34.5-36°C) Shivering Lethargy Staggering gait <u>MODERATE</u> (86-94°F, 30-34.5°C) Shivering lessens Confusion Loss of balance

<u>SEVERE</u> (<86°F, <30°C) Stupor Coma Dysrhythmias Cardiac arrest

<u>Assessment</u>

Patients who are hypothermic are unable to maintain adequate internal heat production. Treatment is based on the patient's clinical condition and body temperature. Treatment may range from merely removing wet clothes and drying to active re-warming and ACLS measures. The very young, the very old, and those with chronic medical or debilitating conditions are at increased risk of hypothermia. Core temperatures above 86°F usually have good prognosis of survival after recovery. Core temperatures below 86 \square F have poorer prognosis; their myocardium is more irritable and they are usually unconscious, with stiff and rigid muscles. If severely hypothermic, (temperature less than 86 \square F/30 \square C), for ventricular fibrillation or tachycardia; no medications, three total shocks until warm. If known extended exposure to wet or cold environment and the patient is comatose or in cardiac arrest, treat for severe hypothermia. **No patient is dead until warm and dead.**

<u>Treatment</u>

EMR	 Eliminate environmental heat loss (remove wet clothes) Avoid rough movement and excess activity Oxygen Apply heat to head, neck, chest, groin, armpits (only if mild or moderate hypothermia) Rapid transport to SLMC for active internal re-warming if severely hypothermic
ЕМТ	Check blood sugarOral dextrose if airway is protectedAirway management
AEMT	IV with crystalloid (heated)If unable to establish IV consider IO
EMT-I	Cardiac monitor
Paramedic	Advanced airway management

See following page for Hypothermic Flowchart.



Inhalation Injuries

Subjective

Environment: poorly ventilated spaces, fire, explosion, exhaust, furnaces, gases present (i.e., methane, CO, cyanide), barbecues, charcoal fires. Length of exposure. Type of exposure: steam, dry heat, gases, fire victim.

Symptoms: Dyspnea, headache, sore throat, sore mouth, cough, nausea, vomiting, poor coordination.

Objective

Sooty or blistered airway, singed facial hairs, stridor, hoarseness, cough, shortness of breath, labored breathing, changes in mentation, coma.

<u>Assessment</u>

Inhalation is the most rapid route of toxins into body. Onset of symptoms can take up to 12-36 hours. Patients may rapidly deteriorate; airway management may need to be aggressive. Multiple patients with similar symptoms suggests toxic inhalation.

<u>Treatment</u>

EMR	High flow oxygen Removal from toxic environment
ЕМТ	Airway management
AEMT	IV with crystalloidIf unable to establish IV consider IO
EMT-I	Cardiac monitor
Paramedic	Advanced airway management

PROTECT YOURSELF AND OTHERS FIRST

Subjective

Patient may complain of localized pain, burning sensation and itching at the site, anxiety, restlessness, weakness, dizziness, headache or syncope. Numbness in affected limb or body part, joint pain or muscle cramps. There may also be chest tightening, shortness of breath, abdominal pain, nausea or chills. Animal or insect identification may be important to prove allergies, multiple bites or stings.

Objective

Local Reaction: Stings or puncture marks on skin with redness, swelling, discoloration or blistering at site. Systemic Reaction: Anaphylaxis. Black Widow Spider Bite: progressive muscle spasm of back, abdomen and large muscle groups, vomiting, seizures, paralysis, hypertension, headache, tingling and burning sensation. Brown Recluse or Hobo Spider Bite: reddened area with underlying blister formation and surrounding area of necrosis. Over several days area turns dark and becomes ulcerated. Tick Bites: Lyme Disease may present with distinctive bull's eye rash surrounding the bite developing over a month and accompanied by flu like symptoms. Animal Bites: contusions or superficial abrasions to severe crush injuries, deep puncture wounds and tissue loss may develop.

<u>Assessment</u>

Insect stings, spider bites, scorpion stings, and marine life stings are typical sources of injected poisons or toxins. Gather information from the patient, bystanders and the scene and determine whatever you can about the insect, spider or other possible source of the poisoning.

<u>Treatment</u>

EMR	 Scene safety Oxygen Wound care Remove constricting items (clothing, jewelry) Insect stings: gently remove stinger Tick: do not remove; refer to hospital Animal bites: if patient not transported, contact law enforcement Epi-Pen for anaphylaxis (additional training required)
ЕМТ	Epinephrine for anaphylaxisAirway management
AEMT	IV with crystalloidIf unable to establish IV consider IO
EMT- I	Cardiac monitorMorphine or Fentanyl
Paramedic	 Advanced airway management Epinephrine Diazepam

Nausea & Vomiting

Subjective

Nausea – unpleasant sensation of feeling the urge to vomit. Retching – spasmodic esophagus and stomach contractions against a closed glottis, often resulting in emesis. Emesis (vomiting) – forceful abdominal contractions emptying the stomach through the mouth.

Objective

Patient may appear with pale and diaphoretic skin.

Emesis may contain partly digested food particles, be yellow from bile, black from partly digested blood or red from active upper gastrointestinal bleeding.

<u>Assessment</u>

Nausea and vomiting are unpleasant sensations and actions with many possible causes.

<u>Treatment</u>

EMR EMT	Keep patient comfortableOxygen
AEMT	IV with crystalloid
EMT- I Paramedic	Zofran ODT oralOndansetron (Zofran)

The smell of a rubbing alcohol wipe may ease the feeling of nausea.

Near Drowning

Subjective

Determine the length of exposure to the water and if the water was fresh or salt water, and the water temperature. Patient may exhibit dyspnea, cough, chest pain, headache, nausea, vomiting, neck pain, some injuries may be sustained through bystander treatment.

Objective

Assess the level of consciousness, rales, respiratory rate, cyanosis, pallor, internal temperature, and hypotension.

Assessment

Assess for other injuries: shallow water dives may include blunt trauma and scuba diving may include barotrauma.

EMR	 Suction airway Spinal immobilization Oxygen Remove wet clothing and warm patient
ЕМТ	Airway management
AEMT	IV with crystalloidIf unable to establish IV consider IO
EMT-I	Cardiac monitor
Paramedic	Advanced airway managementNasal or oral gastric tube

<u>Subjective</u>

History of organophosphate poisoning or exposure to nerve agent and: Diarrhea, Urination, Miosis, Bradycardia, and Bronchospasm Emesis, Lacrimation, Salivation, Secretion and Sweating. (DUMB-BELS).

Objective

Examination may show:

Mild Symptoms: Fatigue, Headache, Nausea, Vomiting, Diarrhea, Wheezing, and Rhinorrhea

Moderate Symptoms: Mild symptoms PLUS; systemic weakness, Fasciculations, Unable to walk.

Severe Symptoms: Mild and Moderate Symptoms PLUS; Flaccid Paralysis, Syncope, Comatose.

Remember the chemical that caused the poisoning may still be contaminating the patient; perform proper decon and protect yourself as a responder from cross contamination. <u>Assessment</u>

Diagnosis of Organophosphate poisoning or exposure to Nerve Agent is made on the basis of the patient's symptoms and known exposure. If multiple patients present at one setting but a known exposure is not confirmed you should take precautions and treat the patients.

<u>Treatment</u>

Mark 1 auto injectors available in the Chempack supply at Klamath County Jail the incident commander must facilitate transport to the scene. (1 kit = 1 atropine and 1 Pralidoxime auto injector). Also available in the Chempack is a supply of Diazepam.

EMR	Oxygenvital signs
EMT AEMT	 If patient is decontaminated, transport as soon as possible <u>Mild Symptoms Without Respiratory Distress</u> Mark 1 kit auto injector should not be used <u>Mild Symptoms With Respiratory Distress</u> Administer one Mark-1 kit; Repeat as needed every 5 – 10 minutes – max. 3 Mark-1 kits <u>Moderate Symptoms</u> Administer 1-2 Mark-1 kits Repeat as needed every 5 – 10 minutes – max. 3 Mark-1 kits <u>Severe Symptoms</u> Administer up to 3 Mark-1 kits Secure airway and assist ventilations
EMT-I	Cardiac monitor
Paramedic	• Diazepam

Pain Management

Subjective

Patient may complain of pain as a part of an acute illness or injury. Patient's pain may be rated as uncomfortable to intolerable.

Objective

Patient in pain may appear pale, diaphoretic, anxious, restless or irritable. Patient may be tachypneic or tachycardiac. Exam may or may not reveal a source of the pain. Patient's exam may be normal.

Assessment

Patient management should be initiated to control pain to a comfortable level as appropriate and possible. Examples of processes causing pain include, but are not limited to: back spasms, migraine headache, cardiac chest pain, orthopedic injury, abdominal pain, burns, cancer, pancreatitis, diverticulitis or kidney stones.

EMR EMT	Make patient comfortableOxygen
AEMT	IV with crystalloidIf unable to establish IV consider IO
EMT-I	Morphine or FentanylConsider prophylactic ondansetron
Paramedic	Ketamine, Diazepam or Midazolam for sedation

Poisons & Overdoses

Subjective

Determine route of exposure: ingestion, inhalation, injection or surface absorption. Description of exposure: type of poison, quantity, time elapsed since exposure or ingestion. Reason for exposure or ingestion: accidental, abuse, neglect, assault or suicidal gesture. Past medical history: medication, diseases, psychiatric history, drug abuse. Actions taken by bystanders: induced vomiting, antidotes given.

Objective

C.N.S. - altered level of consciousness, headache, seizures, hallucinations, coma.
Pupils - constricted (narcotics) or dilated (barbiturates, CO). Respiratory - abnormal breathing, tachypnea or shallow respirations. Cardiovascular - tachydysrhythmias (methamphetamine, cocaine, ASA) or bradydysrhythmias (digitalis, organophosphates).
Hypotension or hypertension. Skin - cyanosis, pallor, diaphoretic, evidence of needle tracks.
Gastrointestinal - burns or stains around patient mouth, odor on breath, gag reflex, nausea & vomiting, abdominal pain or tenderness.

<u>Assessment</u>

Poisonings and overdoses may be accidental or intentional exposure of the body to toxic substances in an amount sufficient to have a damaging or destructive effect. **SLUDS BAM** - salivation, lacrimation, urination, defecation, sweating, bronchospasm, arrhythmia, miosis suggests organophosphate poisoning. Bring all medicine containers. If suspected hazardous material, leave container but obtain correct spelling and UN or NFPA704 number.

EMR	 Oxygen Contact medical control with specifics of poisoning if needed Oregon Poison Control 1-800-222-1222 Activated charcoal if within one hour of ingestion and after medical control consultation Narcan if narcotic overdose suspected
EMT	 Check blood sugar Oral glucose Airway management Mark 1 Auto injector for organophosphate or nerve agents
AEMT	 IV with crystalloid If unable to establish IV consider IO IV dextrose
EMT-I	Cardiac monitor
Paramedic	 Advanced airway management Atropine for Organophosphate poisoning Sodium bicarbonate for symptomatic tricyclic anti-depressant poisoning Calcium Gluconate for calcium channel blocker or magnesium poisoning Glucagon for beta blocker poisoning

Respiratory Distress

Subjective

Onset and duration of dyspnea, pain (quality, region, severity, provocation), hemoptysis, cough (sputum, color), hoarseness, dysphagia, time of onset of symptoms, change with position, fatigue, history of injury to area, previous history of similar episodes, exposure to toxic substances, overdose, history of recent surgeries, or prior heart or lung problems and medications.

Objective

Rales, rhonchi, wheezing, stridor, hives, cyanosis, tachycardia, tachypnea, tripod sitting, pursed lip breathing, level of consciousness, temperature, diaphoresis, trauma, subcutaneous emphysema, bruising, paradoxical movement, jugular venous distention, tracheal position, retractions.

<u>Assessment</u>

Respiratory distress has a multitude of causes. Differential diagnosis will be made both on subjective and objective findings. Many things may lead to respiratory distress: CHF, COPD, asthma, trauma, pulmonary embolism, respiratory infections, croup, epiglottitis, anaphylaxis, foreign bodies, poisonings, inhalation injuries and neurological problems.

EMR	Oxygen Position of comfort
ЕМТ	Airway managementRefer to CHF, COPD or Asthma protocols as needed
AEMT	IV with crystalloidIf unable to establish IV consider IO
EMT-I	Cardiac monitor
Paramedic	Advanced airway management

Respiratory Distress - Asthma

Subjective

Known exposure to allergens, symptoms of respiratory infection, increased emotional stress, environmental changes, time of onset of symptoms, history of asthma, tightness in chest, cough, or past medical history, recent hospitalizations, medications, frequency of respiratory medication use.

Objective

Wheezing, decreased or absent breath sounds, prolonged expiratory phase, tachycardia, tachypnea, use of accessory muscles, retraction, cyanosis, decreased level of consciousness, diaphoresis, exhaustion, tripod sitting, one to three word sentences, decreased SaO₂.

<u>Assessment</u>

Due to the narrowing airway passages, inflammation and increased mucus production, coughing, chest tightness and wheezing usually develop. The patient's level of respiratory distress will dictate how aggressive your treatment should be. Patients may be using inhalers: Azmacort, Vanceril, Albuterol (Ventolin or Proventil), Ipratropium (Atrovent), Maxaire or be taking Theophylline or prednisone. Also consider CHF, COPD, pneumonia, and cardiac problems.

EMR	 Position of comfort High flow oxygen May assist with self-administration of patient's own metered dose inhaler
ЕМТ	 Administer nebulized albuterol with or without ipratropium bromide CPAP Airway management
AEMT	IV with crystalloidIf unable to establish IV consider IO
EMT-I	Cardiac monitor
Paramedic	 Advanced airway management Epinephrine - use caution in patients over 50 with cardiac history Magnesium sulfate

CHF/Pulmonary Edema

Subjective

Duration of symptoms, dyspnea on exertion or at rest, fatigue, orthopnea, paroxysmal nocturnal dyspnea, ankle swelling, chest pain or pressure, cough, sputum color, recent weight gain, past medical history, medications and recent hospitalizations.

Objective

Rales, rhonchi, wheezing, tachypnea, tachycardia, cyanosis, inability to speak full sentences, need to sit upright, hypertension (early) or hypotension (late), dysrhythmias, jugular vein distention, peripheral edema.

<u>Assessment</u>

Left sided failure leads to pulmonary edema, increased preload and after load. This has a short onset (2-24 hours). Patients are afebrile, have bilateral abnormal breath sounds and clear or pink sputum, cardiac history and may currently be on cardiac medications: Digoxin (Lanoxin), Furosemide (Lasix), HCTZ, Metoprolol (Lopressor), Atenolol (Tenormin), nitro patches or ACE inhibitors.

EMR	OxygenPosition of comfort
ЕМТ	CPAPAirway management
AEMT	 IV with crystalloid If unable to establish IV consider IO Albuterol if wheezing
EMT-I	Cardiac monitorNitroglycerin
Paramedic	 Advanced airway management Dopamine for cardiogenic shock Diazepam for anxiety

COPD Exacerbation

(Chronic Obstructive Pulmonary Disease)

Subjective

Duration and onset of symptoms, dyspnea on exertion, fatigue, chest pain or pressure, fever, cough, sputum, color, increased amount of sputum, smoking history, recent illness (especially upper respiratory infection), medications, past medical history, home oxygen, exposure to allergens or irritants.

Objective

Rhonchi, wheezing, decreased air movement, tachypnea, tachycardia, cyanosis, prolonged expiratory phase, pursed lip breathing, barrel chested, confusion, one to three word sentences.

<u>Assessment</u>

COPD is a chronic disease which people live with every day. During exacerbations patients develop respiratory distress which leads to hypoxia. Onset is often over a couple of days. These patients frequently are on home oxygen and use nebulizers: Albuterol (Ventolin or Proventil), Ipratropium (Atrovent), corticosteroids (Vanceril, Azmacort) and take respiratory medications (Theophylline or prednisone).

EMR	Position of comfortOxygen
EMT	 May assist with self-administration of patient's own metered dose inhaler Administer nebulized albuterol with or without ipratropium bromide CPAP Airway management
AEMT	IV with crystalloidIf unable to establish IV consider IO
EMT-I	Cardiac monitor
Paramedic	Advanced airway management

Seizures

Subjective

Assess PMH for known seizure disorder, onset, length, frequency, type, presence of aura. Check for head trauma, drug or alcohol use, diabetes, heart disease, CVA, pregnancy, fever, headache or stiff neck. Anticonvulsant medications might include Phenytoin (Dilantin), Phenobarbital, Carbemazepine (Tegretol) and Valproic acid (Depakote). Determine compliance with seizure medications.

Objective

Assess for head trauma or mouth injury, altered level of consciousness, incontinence of urine or stool or observed seizure activity. Increased body temperature may cause seizures and assess for rashes, petechiae or purpura.

<u>Assessment</u>

With injury, infection or disease the electrical activity of the brain becomes irregular which brings about sudden changes in sensation, behavior, or movement called seizures. *Grand Mal* - generalized major motor seizure. Alternating tonic (contractions) or clonic (successive contractions and relaxations) movements of extremities.

Focal Motor - simple partial seizure, characterized by dysfunction of one area of the body including, tingling, stiffening or jerking.

Psychomotor - complex partial seizure, characterized by abnormal behavior such as confusion, glassy stare, aimless movements, lip smacking or fidgeting with clothing.

Petit Mal - seizure is brief, usually 1-10 seconds, with a temporary loss of concentration. <u>Treatment</u>

EMR	 Place patient on floor or ground; remove objects that might cause harm Oxygen Place patient into recovery position when seizure has stopped
ЕМТ	Check blood sugarOral glucose if indicated and no airway risk
AEMT	 IV with crystalloid If unable to establish IV consider IO Dextrose IV if indicated
EMT-I	Cardiac monitor
Paramedic	 Advanced airway management Diazepam Midazolam

Shock

Subjective

Mechanism of injury: trauma, infection, allergic reaction, toxic exposures, disease. A feeling of impending doom or signs of fear, dizziness, weakness, feeling cold, thirst, shortness of breath, chest pain, vomiting or diarrhea, bloody stools or emesis, abdominal pain. Prior medical illnesses.

Objective

Patient may exhibit confusion, restlessness, agitation, may have pale, cool, clammy skin, shallow or rapid breathing, rapid or weak pulse, hypotension. The patient may also have delayed capillary refill, abdominal tenderness, rigidity, distention or mass, obvious external trauma: amputations, deformities, bruising.

Assessment

Shock is the failure of the cardiovascular system to provide sufficient oxygenated blood to vital tissues of the body.

Hypovolemic - caused by loss of blood or other body fluids.

Cardiogenic - caused by the heart failing to pump blood adequately to vital body parts. **Distributive:** neurogenic, anaphylactic, septic, psychogenic, metabolic - increase in vascular dilatation or permeability.

EMR	OxygenShock positionPrevent loss of body heat
ЕМТ	Airway management
AEMT	 One or two large bore IVs with crystalloid; fluid challenge If unable to establish IV consider IO
EMT-I	Cardiac monitor
Paramedic	Advanced airway managementDopamine or Norepinephrine

Snake Bites

Subjective

Patient may experience localized pain at site of bite, metallic or rubber taste in mouth and lips, thirst blurry or dim vision, weakness, dizziness or lightheadedness, numbness or tingling around face and head. Document time of bite, the snake identification and treatment rendered.

Objective

One or more fang marks with redness, swelling, ecchymosis or oozing from site, followed later by hemorrhagic blisters. Patient may have respiratory distress, tachycardia, hypotension, vomiting or diarrhea, bloody urine or gastrointestinal hemorrhage.

<u>Assessment</u>

The seriousness of a snake bite is related to amount of venom injected, the location of the bite, the type of snake and pre-existing medical conditions. The vast majority of snake bites are non-fatal.

<u>Treatment</u>

PROTECT YOURSELF AND OTHERS FIRST

EMR EMT	 Assure scene safety Calm and reassure patient Minimize victim's physical activity Oxygen Splint bitten extremity in dependent position, below level of heart Remove constricting clothing or jewelry
AEMT	IV with crystalloidIf unable to establish IV consider IO
EMT- I Paramedic	Cardiac monitorMorphine or Fentanyl

Spine Trauma

Subjective

Determine mechanism of injury and force such as high energy transfer, ejection, helmet damage, starred windshield, steering column bent, surface diving accident. Assess for back or neck pain, tingling, paresthesia, numbness or paralysis.

Objective

Spinal injuries at the right level can cause diaphragmatic or impaired breathing. Head injury may accompany spinal injury, it may be closed or an open injury, spinal deformity or tenderness. Patient may be hypotension, experience loss of bladder or bowel control, priapism, paralysis or numbness.

<u>Assessment</u>

The presence of spine trauma and the need to immobilize the patient can be indicated by mechanism of injury, the presence of other injuries or by specific signs or symptoms of spinal cord injury. Spinal cord injury may mask signs and symptoms of other significant injuries.

EMR	 Oxygen Full spinal immobilization or spinal motion restriction depending on criteria Check motor and sensory exam frequently Evaluate and treat for other injuries Prevent loss of body heat
EMT	Airway management
AEMT	IV with crystalloidIf unable to establish IV consider IO
EMT-I	Cardiac monitor
Paramedic	 Advanced airway management Atropine if bradycardic and hypotensive Dopamine or Norepinephrine

Syncope

Subjective

Onset, frequency, stressful or anxiety provoking factors, position of patient, seizure activity, vertigo, nausea, chest or abdominal pain, diaphoresis, past medical history, medications, previous syncope, recent illness, dietary changes, pregnancy.

Objective

Check for orthostatic blood pressure and pulse changes, level of consciousness, cardiac dysrhythmias, pulsating abdominal mass, other injury or bleeding.

Assessment

Syncope implies a brief loss and rapid return of consciousness. The most common causes are vasovagal reactions and idiopathic (unknown). Other common causes include GI bleed, abdominal aortic aneurysm, cardiac dysrhythmia and cerebrovascular accident.

EMR	OxygenShock position
EMT	Check blood sugarOral glucose if no airway risk
AEMT	 IV with crystalloid If unable to establish IV consider IO IV dextrose
EMT- I Paramedic	Cardiac monitor

Trauma System Entry

Subjective

Evaluate the mechanism of injury, environmental conditions and co-existing medical illnesses or conditions.

Objective

Some injuries may be obvious but don't be distracted, examine the patient fully and exclude any the hidden injuries. Undress the patient appropriately.

Assessment

Entry of a patient into the trauma system speeds care for those who need resuscitation or emergency surgical procedures during the first hour or two after trauma.

See chart on next page:

EMR	 High flow oxygen Cover open wounds with occlusive dressing Maintain body heat Spinal immobilization Notify trauma hospital of entry criteria Apply trauma band
ЕМТ	Airway management
AEMT	Two large bore IVs with crystalloidIf unable to establish IV consider IO
EMT-I	Cardiac monitor
Paramedic	Advanced airway managementChest decompression



Vaginal Bleeding

Subjective

Cramping or pain, onset of bleeding, clots or tissue, last normal menstrual period, method of birth control, due date if pregnant, history of vaginal trauma, number of pads or tampons per hour, past medical history, medications, referred shoulder pain.

Objective

Estimated blood loss, hypotension, abdominal tenderness or guarding.

<u>Assessment</u>

Vaginal bleeding can occur for a variety of reasons: pregnancy, trauma, hormonal imbalance and cancer. Patients may be miscarrying and unaware that they were pregnant. Tissue fragments or clots should be brought to the hospital. Emotional support may need to be provided to the patient and family. In cases of assault, preserve evidence.

Treatment

EMR EMT	OxygenShock position
AEMT	One or two large bore IVs with crystalloidIf unable to establish IV consider IO
EMT- I Paramedic	Cardiac monitor

*Patients with third trimester bleeding should be transported to SLMC obstetrics.



Pre Hospital Medications

Section C

Acetaminophen

Trade Name

Tylenol, APAP, Panadol <u>Action</u>

Antipyretic, analgesic Indications

Fever greater than 39°C (102.2°F) in children less than 12 years old who:

- Are conscious, awake and appear toxic or have a prolonged transport time; OR
- Recent seizure.

Contraindications

- Known sensitivity to acetaminophen
- Hyperthermia from environmental causes

Side Effects & Precautions

- Significant overdose may cause liver failure.
- Do not give if patient has had appropriate dosage within two hours.

How Supplied

- 160 mg/5.0 ml elixir
- 120 mg/suppository

Route & Dosage

PARAMEDIC:

Pediatric: 15 mg/kg: oral if conscious and awake, otherwise rectal suppository

AGE	WEIGHT (LB)	WEIGHT (KG)	DOSE (TSP)
Under 2 years	<24 lbs	<11 kg	15 mg/kg
2 - 3 years	24 - 35 lbs	11 - 16 kg	1 tsp = 5 ml = 160 mg
4 - 5 years	36 - 47 lbs	16 - 21 kg	1½ tsp = 7.5 ml = 240
6 - 8 years	48 - 59 lbs	22 - 27 kg	2 tsp = 10 ml = 320
9 - 10 years	60 - 71 lbs	27 - 32 kg	2½ tsp = 12.5 ml =
11 years	72 - 95 lbs	33 - 43 kg	3 tsp = 15 ml = 480

ACETAMINOPHEN DOSING

Trade Name

Ecotrin and others **Action**

Inhibits platelet aggregation Indications

• Cardiac chest pain

Contraindications

- & Known sensitivity to aspirin
- Active GI bleeding

Side Effects & Precautions

Do not administer if is unconscious or unable to protect airway. **How Supplied**

81 mg chewable tablet **Route and Dosage**

	Cardiac chest pain		
EMR EMT AEMT EMT- I Paramedic	4 tablets (81 mg each) orally		

Activated Charcoal

Trade Name

Actidose

<u>Action</u>

Absorbs ingested toxic substances and inhibits gastrointestinal absorption by forming a barrier between remaining particulate material and gastrointestinal mucosa.

Indications

Oral toxic ingestion, poisoning or overdose in conscious and awake patients within 1 hour of ingestion and after consultation with on-line medical control.

Contraindications

- & Known sensitivity to activated charcoal
- Unconscious patient or diminishing level of consciousness
- Ingestions of mineral acids or alkalis, petroleum products or cyanide

Side Effects & Precautions

- Relatively contraindicated in tricyclic overdoses, administration can result in aspiration or significant particulate obstruction of the airway.
- Do not administer activated charcoal in the presence of Ipecac.

Route and Dosage

Prior to delivering this medication, contact medical control.

	Adult	Pediatric	
EMR			
EMT			
AEMT	25- 50 grams orally		
EMT- I			
Paramedic			

Adenosine

Trade Name

Adenocard

<u>Action</u>

Slows conduction time through the A-V node and can interrupt the re-entry pathways through the A-V node and can restore normal sinus rhythm in patients with paroxysmal supraventricular tachycardia (PSVT) including Wolff-Parkinson-White syndrome. Half-life is less than 10 seconds.

Indications

Supraventricular tachycardia

Contraindications

- Known sensitivity to adenosine
- Sick sinus syndrome or second or third degree heart block without functioning pacemaker

Side Effects & Precautions

- Transient asystole may occur. It may also cause facial flushing, headache, shortness of breath, dizziness, nausea or chest pain.
- Dysrhythmia may develop including PVCs, PACs, sinus bradycardia, sinus tachycardia, A-V blocks and asystole.
- Not initial treatment for wide complex tachycardia. Larger doses may be required in the presence of methylxanthines (caffeine, theophylline).
- Will probably not convert atrial fibrillation or flutter, but may slow the rate transiently.
- If given to patients who have Wolff-Parkinson-White syndrome may cause paradoxical increase in ventricular rate.

How Supplied

6.0 mg/2 ml vial **Route and Dosage**

	Pediatric	Adult
Paramedic	 0.1 mg/ kg rapid IV or IO push over 1- 2 seconds with 10 ml saline rapid IV push at proximal IV or IO port. May repeat with 0.2 mg/kg in 1-2 minutes 	 6 mg rapid IV or IO push over 1- 2 seconds Followed by 20 ml saline rapid IV push at next most proximal IV or IO port. If no conversion, 12 mg rapid IV or IO over 1- 2 seconds followed by 20 ml saline rapid IV or IO push at next most proximal IV port preferably a large bore antecubital site, in 1-2 minutes. May repeat 12 mg once in 1-2 minutes

Albuterol

Trade Name

Proventil, Ventolin Action

Potent, relatively selective beta 2-adrenergic bronchodilator. Onset of action is 2-15 minutes; duration of action is 4-6 hours.

Indications

Bronchospasm due to asthma, COPD, CHF or anaphylaxis (Approved for use in asthma and COPD only at the EMT level).

Contraindications

Schown sensitivity to Albuterol.

Side Effects & Precautions

- Palpitations, anxiety, nausea and dizziness.
- Stop treatment if frequent PVCs or a tachyarrhythmia other than sinus tachycardia develops.

How Supplied

2.5 mg/3 ml solution Route and Dosage

EMT for Asthma and COPD Only AEMT EMT- I Paramedic	•	3 ml solution via nebulizer with oxygen set at 6 - 10 L/min May repeat twice
---	---	--

Amiodarone

Trade Name

- Cordarone
- Pacerone

<u>Action</u>

Antiarrhythmic agent **Indications**

- Ventricular fibrillation or pulseless ventricular tachycardia unresponsive to initial defibrillation.
- Ventricular tachycardia with a pulse in a stable patient.

Contraindications

- Known sensitivity to Amiodarone.
- Second Se

Side Effects & Precautions

- If severe signs or symptoms develop use immediate cardioversion.
- May cause hypotension.
- May cause or worsen bradycardia or conduction defects.
- May worsen congestive heart failure.
- Rarely may precipitate cardiac dysrhythmias torsades de pointes.

How Supplied

150 mg/ 3ml ampule and D5W. **Route and Dosage**

	Ventricular fibrillation/Pulseless ventricular tachycardia	Ventricular tachycardia with a pulse	Post-conversion from v-fib or tachycardia to a perfusing rhythm
EMT- I Paramedic	 300 mg IV or IO If no perfusing rhythm 150 mg IV or IO bolus in 3 - 5 minutes 	 150 mg in 10-100ml ns over 10 minutes Repeat once in 10 minutes if no change in rhythm 	 150 mg in 10-100ml normal saline IV or IO over 10 minutes
Atropine Sulfate

Trade Name

Atropine Action

Parasympatholytic agent with the following effects: increases heart rate, increases conduction through A-V node, reduces motility and tone of GI tract, reduces tone of the urinary bladder, dilates pupils, dilates bronchi.

Indications

- Symptomatic bradycardia.
- Antidote for symptomatic organophosphate poisoning. (See Mark I Autoinjector)
- Pretreatment for RSI in children < 10 years.

Contraindications

& Known sensitivity to atropine sulfate.

Side Effects & Precautions

- Relatively contraindicated in second degree type 2 A-V block and third degree block with wide QRS complexes in the presence of an acute MI.
- Bradycardia in the setting of an acute MI is common; do not treat rhythm unless the patient is symptomatic or there are signs of poor perfusion.

How Supplied

1 mg/10 ml prefilled syringe

	Symptomatic bradycardia	Pediatric Symptomatic bradycardia	Organophosphate poisoning
EMT-I	 0.5 mg IV or IO push, every 3-5 minutes, maximum 3mg 		
Paramedic	 0.5 mg - 1 mg IV or IO push, every 3-5 minutes Maximum 3 mg. 	 0.02 mg/kg, IV or IO. Minimum single dose: 0.1 mg. Maximum single dose: 0.5 mg in child, 1.0 mg in adolescent. May repeat once. 	 Double dose every 5 minutes until symptoms controlled. Use of auto-injector is indicated

Calcium Chloride

Trade Name

Calcium Chloride Action

Electrolyte essential for muscle contraction Indications

- Antidote for overdoses of calcium channel blockers or magnesium.
- Topical treatment for hydrogen fluoride or hydrofluoric acid exposure.

Contraindications

& Known sensitivity to calcium gluconate.

Side Effects & Precautions

- Will precipitate if infused in same line with sodium bicarbonate.
- Use with caution in patients taking Digoxin.

How Supplied

1 gram (=13.6 mEq) in 10 ml (=10% solution) pre-filled syringe or vial <u>Route and Dosage</u>

	(Adult) Calcium Channel Blocker Or Magnesium Sulfate overdose	(Pediatric) Calcium Channel Blocker Or Magnesium Sulfate overdose	Hydrogen fluoride or hydrofluoric acid exposure
Paramedic	1 gram IV or IO (slowly, not exceeding 1 ml/min, repeat in 10 minutes as needed	20 mg/kg repeat every 10 minutes as needed	Apply topically - (mix 1 ampule in 1 ounce (30cc) K-Y jelly)

Crystalloid

Trade Name

Normal Saline, 0.9% Saline, NormoSol R, Lactated Ringer's **Action**

Sterile isotonic fluid for intravenous use **Indications**

Intravascular volume expansion, fluid challenge, medication administration or catheter flush. **Contraindications**

None.

Side Effects & Precautions

- Administer with caution to patients with fluid overload such as pulmonary edema, brain injury, heart disease or kidney disease.
- In pediatric patients use a pump, volutrol or syringe to avoid excessive administration.

How Supplied

- Multi dose vials
- Prefilled syringes
- 50, 250, 500 and 1000 ml bags

	Catheter flush	Medication flush	(Adult) Volume expansion	(Pediatric) Volume expansion
AEMT EMT- I Paramedic	2-5 ml IV or IO	10-20 ml IV or IO	200-1000 ml IV or IO, repeat to desired effect	10-20 ml/kg IV or IO, repeat to desired effect

Diazepam (Optional)

Trade Name

Valium **Action**

Benzodiazepine with anticonvulsant, skeletal muscle relaxant, anxiety reducing, amnesic and sedative effects

Indications

- Sedation for painful procedures (such as transcutaneous pacing or cardioversion), amputations or combative patients.
- Muscle relaxation for patients with dislocations or significant fractures.
- Post RSI sedation.
- Seizures.

Contraindications

Known sensitivity to diazepam.

Side Effects & Precautions

- Respiratory depression, hypotension or sedation is common, particularly in the elderly.
- In those with chronic disease or in the presence of other sedating agents: alcohol, barbiturates, benzodiazepines or opiates paradoxical excitement or agitation may occur.

	Adult	Pediatric
Paramedic	 2-10 mg IV, IO, or IM every 3-5 minutes Max of 10 mg for sedation Max of 20mg for seizures May be given rectally for seizures 	 0.1-0.3 mg/kg IV, IO or IM (maximum dose 5 mg) 0.5 mg/kg rectal (maximum dose 5 mg) May repeat once

Diphenhydramine

Trade Name

Benadryl <u>Action</u>

Blocks histamine receptor sites. Anticholinergic agent. Indications

- Less effective and longer acting than epinephrine for use in mild to moderate anaphylactic or allergic reactions.
- Dystonic reactions for Paramedics only.

Contraindications

& Known sensitivity to diphenhydramine.

Side Effects & Precautions

- Usually sedating but may occasionally cause hyper-excitability, most often in children.
- Anticholinergic and anti-parkinsonian effect.

How Supplied

- 50 mg/1 ml vial or prefilled syringe
- 25 mg tablets (optional)
- 12.5 mg/5 cc (optional)

	Adult	Pediatric
EMT- I Paramedic	25-50 mg IV, IO, IM or orally	1-2 mg/kg IV, IO, IM or orally

Dopamine

Trade Name

Intropin

Action

Dilates renal and mesenteric arteries, increases cardiac output and causes systemic vasoconstriction. **Indications**

- Hypotension not responding to volume replacement.
- Symptomatic bradycardia unresponsive to atropine and pacing.

Contraindications

- Known sensitivity to dopamine.
- By Hypotension without adequate volume replacement.

Side Effects & Precautions

- Vasoconstriction and myocardial workload increase as dose increases which may result in cardiac dysrhythmia, angina or headache.
- Inactivated in alkaline solutions such as sodium bicarbonate.
- Causes tissue necrosis if IV or IO infiltrates.

How Supplied

400 mg in 10 ml vial to be mixed in:

- 250 ml saline (1600 mcg/ml) or
- 500 ml saline (800 mcg/ml)

400 mg in premixed bag

- 250 ml (1600 mcg/ml) or
- 500 ml (800 mcg/ml)

Route and Dosage

PARAMEDIC: Dose: 2-20 mcg/kg/min IV or IO infusion titrated to desired effect.

Dopamine (Intropin) 400 mg in 250 (1600 mcg/ml)

			Patient weight - kg										
		2.5	5	10	20	30	40	50	60	70	80	90	100
	2	*	*	*	1.5	2	3	4	5	5	6	7	8
	5	*	1	2	4	6	8	9	11	13	15	17	19
mca/ka/min	10	1	2	4	8	11	15	19	23	26	30	34	38
	15	1.4	3	6	11	17	23	28	34	39	45	51	56
	20	2	4	8	15	23	30	38	45	53	60	68	75

Microdrops per minute (or ml/hr)

For 800 mcg/ml concentration double the number of micro-drops above. (Dopamine 400 mg in 500 ml saline)

Epinephrine

Trade Name

Adrenaline

<u>Action</u>

Naturally occurring catecholamine with both alpha and beta adrenergic effects: increases heart rate, myocardial contractility, myocardial oxygen consumption, systemic vascular resistance and causes arterial vasoconstriction and bronchodilation.

Indications

- Ventricular fibrillation, pulseless ventricular tachycardia, asystole, PEA.
- Symptomatic bradycardia.
- Anaphylaxis.
- Asthma.

Contraindications

- & Known sensitivity to epinephrine.
- Cardiac chest pain.

Side Effects & Precautions

- Commonly causes anxiety, tremor, palpitations and increases blood pressure. May cause angina or myocardial infarction.
- Use cautiously in patients over 50 years of age or with a history of coronary artery disease.
- May be inactivated if mixed with alkaline solutions, such as bicarbonate.

How Supplied

- 1 mg/1 ml (1:1,000) ampule or Tubex or Epi-Pen
- 1 mg/10 ml (1:10,000) prefilled syringe
- 30 mg/30 ml (1:1,000) vial

Route and Dosage

Anaphylaxis or (Asthma for Paramedics only) hypotension, bronchospasm, angioedema, itching, hives

	(Adult) Anaphylaxis	(Pediatric) Anaphylaxis
EMR	Epi-Pen; After completion of required additional training	
EMT	0.3 - 0.5 mg = 0.3 - 0.5 ml of 1:1,000 IM or Epi-Pen Auto Injector May repeat in 3-5 minutes	0.01 mg/kg = 0.01 ml/kg of 1:1,000 IM or Auto Injector Maximum 0.5 mg/dose. May repeat in 3-5 minutes
AEMT EMT- I	0.3 - 0.5 mg = 0.3 - 0.5 ml of 1:1,000 IM or 0.1 mg = 1 ml of 1:10,000 IV or EMT I can give IO. May repeat in 3-5 minutes	mg/kg = 0.1 ml/kg of 1:10,000 IV or EMT I can give IO. Maximum 0.5 mg/dose May repeat in 3-5 minutes
Paramedic	0.3 - 0.5 mg = 0.3 - 0.5 ml of 1:1,000 IM	mg/kg = 0.1 ml/kg of 1:10,000 IV or IO Maximum 0.5 mg/dose May repeat in 3-5 minutes

Epinephrine (Routes and Doses continued)

Cardiac Arrest: ventricular fibrillation, pulseless ventricular tachycardia, pulseless electrical activity or asystole

	(Adult) Cardiac arrest	(Pediatric) Cardiac arrest	(Neonates) Cardiac arrest
EMT-I	 1 mg of 1:10,000 IV or IO repeated every 3-5 minutes as needed 	 Initial dose: 0.01 mg/kg (0.1 ml/kg of 1:10,000) IV or IO May repeat every 3-5 minutes 	 Initial dose: 0.01 - 0.03 mg/kg (0.1 - 0.3 ml/kg of 1:10,000) IV, IO May repeat every 3-5 minutes
Paramedic	 Initial dose:1 mg of 1:10,000 IV or IO, or May repeat every 3-5 minutes 	 May repeat every 3-5 minutes 	 May be given ET or UV May repeat every 3-5 minutes

Severe bradycardia or anaphylactic shock:

	Severe Bradycardia	Infusion
EMT- I Paramedic	0.1 – 1 mcg/kg/min	Mix 1 mg (1:1,000) in 250 ml (4 mcg/ml) or 500 ml (2 mcg/ml) normal saline. 2 - 10 mcg/minute IV or IO titrated to desired effect

Etomidate

Trade Name

Amidate Action

A short acting sedative hypnotic agent Indications

- Sedation for rapid sequence intubation.
- Although Versed is preferred, further dosage of Etomidate can be used for continued sedation.

Contraindications

Sknown sensitivity to Etomidate.

Side Effects & Precautions

- Administer in a large bore, free flowing IV or IO.
- Respiratory depression, hypotension and cardiopulmonary arrest are more likely in the elderly, those with COPD, renal, heart or liver disease.
- Use with caution in the presence of alcohol, barbiturates, narcotics or benzodiazepines.
- Skeletal muscle jerking or movements occur commonly.
- Duration is 4-10 minutes.
- Increase risk of bruxism (masseter muscle spasm) with fast delivery.
- May cause vomiting without paralytic.

How Supplied

2 mg/ml Route and Dosage

	Adult	Pediatric
Paramedic	 0.3 mg/kg IV or IO over 30 - 60 seconds. Typical adult dose is 20 mg. 0.15-0.2 mg/kg IV if elderly, debilitated or hypotensive 	0.3 mg/kg IV or IO over 30 - 60 seconds

Fentanyl

Trade Name

Sublimaze

<u>Action</u>

Potent narcotic analgesic Indications

- Musculoskeletal pain including extremity fractures, crush or amputation injuries, in the absence of head, chest and abdominal injuries.
- Severe burns without airway compromise.
- Cardiac chest pain.
- Abdominal pain.

Contraindications

Schown sensitivity to fentanyl.

Side Effects & Precautions

- Rapid Injection can cause respiratory arrest or chest wall rigidity.
- Give over 30-60 seconds.
- Central nervous system depressant, which can cause respiratory depression, peripheral vasodilation, decreased cardiac output and pupillary constriction.
- If morphine is given wait at least 5-10 minutes before giving fentanyl.
- Do not use if systolic BP < 90 mm Hg or SpO2 < 90%.
- Use with caution (smaller or less frequent doses) in the elderly.
- Naloxone (Narcan) will reverse the respiratory effects of fentanyl.

How Supplied

50 mcg/ml in 2 ml ampules Route and Dosage

	Adult	Pediatric		
EMT- I Paramedic	 50 micrograms (mcg) IV, IM, IN or IO slow over 30-60 seconds, then 25 - 50 mcg IV or IO every 3-5 minutes as needed for severe pain Maximum dose 200 mcg 	 1 micrograms (mcg)/kg IV, IM, IN or IO slow over 30-60 seconds, then 0.5 - 1 mcg IV or IO every 3-5 minutes as needed for severe pain up to 4 mcg/kg Maximum dose 200 mcg 		

Glucagon Hydrochloride

Trade Name

Glucagon

<u>Action</u>

A pancreatic hormone which increases blood glucose by converting glycogen to glucose in the liver

Indications

- Documented hypoglycemic reaction in an unconscious or semi-conscious patient where an IV or IO cannot be established.
- Significant beta blocker poisoning.

Contraindications

Known sensitivity to Glucagon hydrochloride.

Side Effects & Precautions

- Use only the dilutent supplied by the manufacturer.
- Common side effects include nausea and vomiting.
- The patient will usually awaken in 15 minutes.
- Give supplemental carbohydrate as soon as possible.
- Glucagon may be available at a patient's home.

	(Adult) For Hypoglycemia	(Pediatric) For Hypoglycemia	(Adult) Beta Blocker Overdose	(Pediatric) Beta Blocker Overdose
AEMT	1 mg (1 unit) IM or IM (May be	 <20 KG: 0.5 mg (0.5 unit) IM 		
Paramedic	needed)	 >20 KG: 1 mg (1 unit) IM 	3-5 mg IV or IO every 5 minutes, maximum 15 mg	50-150 mcg/kg IV or IO

Glucose - Dextrose

Trade Name

D50, D10, Glutose Action

Dextrose is d-glucose, a six carbon sugar, the body's basic energy source.

Indications

Symptomatic hypoglycemia, blood sugar less than:

- 80 mg/dl in an adult and children.
- 60 mg/dl in an infant (8 weeks to 1 year).
- 40 mg/dl in a newborn (birth to 8 weeks).

Contraindications

None

Side Effects & Precautions

- Avoid if patient has an acute cerebral vascular accident.
- Administer through a free flowing IV or IO as dextrose infiltration causes tissue necrosis and is a vein irritant.

How Supplied

- D50: 25g/50ml prefilled syringe for IV or IO, or for oral use.
- Glutose: 15g, 24g or 45g gel for oral use.
- D10: 25g/250ml IV bag for injection.

	(Adult) Oral	(Pediatric) Oral	(Adult) IV or IO	(Pediatric) IV or IO
EMR	12-48 g glutose or	0.5 mg/kg orally if		
EMT	D-50 orally if patient can	patient can protect airway		
AEMT EMT- I Paramedic	protect airway		D10, Titrate to consciousness 50% Dextrose according to hypoglycemia treatment table (see Hypoglycemia)	 Birth to 8 weeks Dilute with 4 volumes saline (= D10) Give 5ml/kg 8 weeks to 1 year Dilute D-50 with equal volume saline (= D25). Give 2ml/kg > 1 year Give 1ml/kg of D-50

Haloperidol

Trade Name

Haldol

Action

Haloperidol is a potent neuroleptic and antipsychotic agent.

Indications

Sedation and restraint of patients, who have a head injury, are combative or are intubated. **Contraindications**

- & Known sensitivity to haloperidol.
- Prolonged QT interval.
- Pregnancy.

Side Effects & Precautions

- Hypotension.
- Acute dystonic reactions best treated with diphenhydramine.

How Supplied

2.5 mg/ml in 2 ml Route and Dosage

	Adult	Pediatric
Paramedic	 Administer 2.5 mg to 5 mg IV or IO push or IM. May repeat up to 10 mg maximum 	0.03-0.07 mg/kg slow IV or IO.Maximum 2.5 mg

Trade Name

Fluzone; Flulaval; Agriflu; Fluarix **Action**

Prevention of seasonal or pandemic Influenza A and/or B infections

INDICATIONS

- Pregnant women
- Household contacts and caregivers for children younger than 6 months of age
- Healthcare, Public Safety and Emergency Medical Service personnel
- All people from 6 months through 24 years old
- Persons aged 25 through 64 who have conditions associated with higher risk of complications from influenza that can compromise respiratory functions or the handling of respiratory secretions or that increase the risk for aspiration.

PRECAUTIONS

- Persons with moderate or severe illnesses with or without fever should delay immunization until illness has resolved. However, minor illnesses with or without fever do not contraindicate use of influenza vaccine; e.g. children with mild URI or allergic rhinitis.
- Persons with a history of Guillain-Barre' syndrome (GBS) within 6 weeks following influenza vaccination has a likelihood of developing GBS with subsequent influenza vaccinations. Guillain-Barre syndrome is an uncommon disorder in which your body's immune system attacks your nerves. Weakness and numbness in your extremities are usually the first symptoms. These sensations can quickly spread, eventually paralyzing your whole body. People with history of developing GBS should be referred to their private health care professionals for consultation to determine if the risk of GBS would be less than complications from influenza.

Contraindications

- Persons with allergic reaction to a previous influenza vaccination
- Persons with history of anaphylactic reactions to eggs.

Dose/Routes

Two doses must be separated by at least 28 days, and updates show 21 days is acceptable. Although the same type of vaccine (FluMist or injectable vaccine) should be used in a 2-dose schedule, mixed schedules are preferable to not completing the series.

	Children and Adults	Pediatric
EMT- I Paramedic	children and adults ages 10 - 49 years = one dose of .5 ml vaccine IM	 healthy children ages 3 to 9 years = two doses of .5 ml vaccine IM healthy children ages 6 months to 2 years 11 months = two doses of .25 ml vaccine IM

Trade Name

Flu-Mist

<u>Action</u>

Prevention of seasonal or pandemic Influenza A and/or B infections.

INDICATIONS

- Healthy non-pregnant persons 2 49 years of age who do not have any of the following:
- 2-4 year olds with history of asthma or wheezing within the last 12 months.
- History of asthma, reactive airway disease, chronic diseases of the pulmonary or cardiac or renal systems, diabetes, or hemogobinopathies. (These people should receive injections.)
- History of immunodeficiency diseases or who are receiving immunosuppressive therapies. (These people should receive injections.)
- Children or adolescents receiving aspirin due to the risk of Reye syndrome.
- Hypersensitivity or anaphylaxis to previous flu mists or eggs.
- Household members of and healthcare workers who have close contact with immunosuppressed persons such as stem cell transplant patients requiring a protected environment.

PRECAUTIONS

- Defer for patients with moderate or severe acute illness.
- Caution for nursing mothers as it is not known whether the vaccine is excreted in human milk.
- Do not administer the Seasonal and H1N1 vaccine at the same visit.
- If nasal congestion would impede vaccine delivery to nasopharyngeal.

Contraindications

- History of Guillain-Barre' syndrome.
- History of a severe allergic reaction to a previous influenza vaccination
- History of anaphylactic reactions to eggs, egg proteins, gentamicin, gelatin or arginine.

Dose/Route

Although the same type of vaccine (FluMist or injectable vaccine) should be used in a 2-dose schedule, mixed schedules are preferable to not completing the series

	Adults and Children	Pediatric
EMT- I Paramedic	Healthy adults and children ages 10 - 49 years = one dose nasal drops	Healthy children ages 2 – 9 years = two doses separated by at least 21 to 28 days

Ipratropium Bromide

Trade Name

Atrovent

<u>Action</u>

Atrovent is an anticholinergic (parasympatholytic) bronchodilator. **Indications**

COPD, bronchospasm or asthma. **Contraindications**

& Known sensitivity to ipratropium bromide or atropine.

Side Effects & Precautions

• Use with caution in patients with narrow angle glaucoma, prostate hypertrophy or bladder neck obstruction.

How Supplied

0.5 mg in 3 ml unit dose. **Route and Dosage**

AEMT	1 unit dose via nebulizer
EMT-I	 May be mixed with Albuterol
Paramedic	 May repeat twice in 10-15 minutes (total dose 3 units)

Ketamine

Trade Name

Ketalar <u>Action</u>

Dissociative Anesthesia, results in a patient who does not appear to be under anesthesia and can swallow, open their eyes and maintain respirations but does not process information on pain.

Indications

- Pre-induction for Rapid Sequence Intubation
- Sedation for painful procedures or painful conditions
- Chemical sedation for combative patients

Contraindications

- Pregnancy
- Infants under 3 Months
- Acute ocular injury

Side Effects & Precautions

• Monitor closely for laryngospasm

How Supplied

500MG in 10 ML, 50MG in 1 ML

	Sedation/Restraint	RSI Induction	Pain Management
		Adult Dosing	
Deremedia	2MG/KG IV/IO 3MG/KG IM	2MG/ KG IV/IO	10MG IV/IO
Paramedic		Pediatric Dosing	
	N/A	2MG/ KG IV/IO	N/A

Lidocaine

Trade Name

Xylocaine

<u>Action</u>

Antiarrhythmic and local anesthetic. Indications

- Ventricular fibrillation/tachycardia
- Pretreatment during RSI for increased intracranial pressure or bronchospasm
- IO infusion in conscious patients

Contraindications

& Known sensitivity to Lidocaine.

Side Effects & Precautions

• Toxicity can produce altered mental status, myocardial depression, and seizures. **How Supplied**

- 2% Lidocaine 100 mg/5 ml prefilled syringe
- 20% Lidocaine 2 gm/10 ml prefilled syringe
- 0.4 % Lidocaine 1 gm/250 ml or 2 gm/500 ml saline solution

	Pretreatment for RSI	IO Infusion in conscious patients	V-Fib/V-Tach	Wide complex tachycardia
AEMT		Prior to IO flush on alert, adult patients, SLOWLY administer .5 mg/kg of 2% Lidocaine through the IO hub		
EMT-I			Adult only 1.5	Adult only 1.0
Paramedic	1.5 mg/kg IV or IO before paralysis		mg/kg IV of IO push. Repeat 0.75 mg/kg every 5-10 minutes up to 3 mg/kg maximum	mg/kg IV of IO push. Repeat 0.5 mg/kg every 5-10 minutes up to 3 mg/kg maximum

Lorazepam

Trade Name

Ativan Action

Benzodiazepine with anticonvulsant, skeletal muscle relaxant, anxiety reducing, amnesic and sedative effects

Indications

- Seizure
- Sedation for painful procedures or injuries or combative patients
- Post RSI sedation

Contraindications

Sknown sensitivity to Lorazepam.

Side Effects & Precautions

- Respiratory depression.
- Hypotension.
- Sedation.
- Paradoxical excitement or agitation may occur.
- Use with caution in the presence of other sedating agents: alcohol, barbiturates, benzodiazepines or opiates.
- Needs to be refrigerated.

How Supplied

2 mg/ml vial

	Adult	Pediatric
Paramedic	 1 - 4 mg IV or IO. 2 - 4 mg IM. May repeat twice 	 0.05-0.1 mg/kg IV or IO (maximum dose 4 mg). May repeat twice

Magnesium Sulfate

Trade Name

Magnesium Sulfate Action

Antiarrhythmic, anticonvulsant, bronchial smooth muscle relaxant, central nervous system depressant **Indications**

- Torsades de Pointes. Refractory ventricular fibrillation or tachycardia.
- Eclampsia.
- Asthma.

Contraindications

None.

Side Effects & Precautions

- Toxicity may produce decreased level of consciousness, decreased reflexes, hypotension or respiratory depression.
- Rapid administration may result in flushing, sweating, mild bradycardia or hypotension.

How Supplied

5 gm/10 ml vial or 1 gm/2 ml vial (50% solution) **Route and Dosage**

	Cardiac arrest	Non-cardiac arrest
Paramedic	1 - 2 grams in 10 ml saline IV or IO push	1 - 2 grams in 10 ml saline over 1-3 minutes IV

B, I, P <u>Trade Name</u>

Atropine

<u>Action</u>

- Atropine parasympatholytic agent with the following effects: increases heart rate, increases conduction through A-V node, reduces motility and tone of GI tract, reduces tone of the urinary bladder, dilates pupils, dilates bronchi.
- Pralidoxime (2-PAM) chloride reactivates cellular acetylcholinesterase molecules preventing organophosphate cholinesterase poisoning if given soon enough (before "aging" occurs).

Indications

• Antidote for organophosphate or nerve gas exposure or poisoning.

Contraindications

None

Side Effects & Precautions

Organophosphate nerve gases - VX, GF, GD (Soman), GB (Sarin), GA (Tabun) - are very rapidly toxic and lethal. Protect yourself and others from exposure.

How Supplied

Atropine 2 mg/0.7 ml and Pralidoxime 600 mg/2 ml auto-injectors **Route and Dosage**

EMT AEMT EMT- I Paramedic	 1-3 Atropine auto-injectors IM into the lateral thigh or upper outer buttocks followed by the same number of Pralidoxime auto-injectors IM in a similar location Seek immediate ALS care
------------------------------------	--

Midazolam

Trade Name

Versed <u>Action</u>

Short acting benzodiazepine, causing central nervous system depression, respiratory depression, skeletal muscle relaxation and amnesia

Indications

- Sedation for transcutaneous pacing or other painful procedures.
- Seizures.
- Sedation for patients with amputations and dislocations and are combative.
- Sedation and restraint of patients who have a head injury and are combative.
- Muscle relaxation for patients with mid-shaft femur fractures.
- Paralysis with induction and post RSI sedation

Contraindications

Known sensitivity to Midazolam.

Side Effects & Precautions

- Administer in a large bore, free flowing IV or IO.
- Respiratory depression, hypotension and cardiopulmonary arrest are more likely in the elderly, those with COPD, renal, heart or liver disease.
- Use with caution in the presence of alcohol, barbiturates, narcotics or other benzodiazepines.

How Supplied

10 mg/2 ml vial or 5 mg/5 ml vial

	Sedation Adult	Sedation Pediatric	Paralysis with induction Adult	Paralysis with induction Pediatric	Seizures
Paramedic	1-5 mg IV, IM or IO over 1 - 2 minutes. May repeat to a max total dose of 5 mg	0.02 - 0.08 mg/kg IV, IM or IO over 1 - 2 minutes. May repeat to a max total dose of 0.15 mg/kg	1 - 5 mg IV, IM with max of 10 mg	0.05-0.1 mg/kg IV, with max of 10 mg	 Up to 2 mg, IV/IO repeat every 5-10 min, max of 5 mg IM: 5 mg

Morphine

Trade Name

Morphine Sulfate Action

Narcotic analgesic and vasodilator Indications

- Severe cardiac chest pain.
- Extremity fractures, crush or amputation injuries in the absence of head, chest and abdominal injuries.
- Abdominal pain.
- Severe burns.
- EMT-I use for pain management only.

Contraindications

& Known sensitivity to morphine.

Side Effects & Precautions

- Central nervous system depressant, which can cause respiratory depression, peripheral vasodilation, decreased cardiac output or pupillary constriction.
- Use cautiously if patient is hypotensive.

How Supplied

10 mg/1 ml ampule, vial, pre-filled syringe or Tubex **<u>Route and Dosage</u>**

	Adult	Pediatric
EMT-I	• 2 - 5 mg IV or IO every 5 minutes	
Paramedic	 as needed to a total dose of 20 mg. 10 mg IM, if IV unavailable 	 0.05 - 0.2 mg/kg IV or IO every 5 minutes to a total dose of 10 mg. 0.1 - 0.2 mg/kg IM, if IV or IO unavailable. Maximum 10 mg

Naloxone

Trade Name

Narcan <u>Action</u>

Narcotic antagonist. Indications

Reverse suspected or known narcotic induced respiratory depression due to: morphine, heroin, fentanyl, hydromorphone (Dilaudid), oxycodone (Percodan), meperidine (Demerol), methadone (Dolophine), hydrocodone (Vicodin), codeine, diphenoxylate (Lomotil), propoxyphene (Darvon), pentazocine (Talwin), nalbuphine (Nubain).

Contraindications

& Known sensitivity to naloxone.

Side Effects & Precautions

- The narcotic dependent patient may experience frank withdrawal after administration. Be prepared to restrain these patients as they may become angry or violent. The goal is to keep the patient out of respiratory depression but not fully conscious.
- Rapid administration may cause nausea.
- Repeated and large doses may be needed.

How Supplied

0.4 mg or 2 mg/ml vial or pre-filled syringe **Route and Dosage**

	Adult	Pediatric
EMR EMT2 mg titrated to reverse respiratory depression- Intranasal ONLY		EMR (None)
		EMT (None)
AEMT EMT- I Paramedic	0.4 - 2 mg titrated to reverse respiratory depression IV, IO, IM. Repeat every 1-3 minutes. Maximum 10 mg	0.1 mg/kg (max 0.4 mg/dose) titrated to reverse respiratory depression IV, IO, IM. Repeat every 1-3 minutes. Maximum 10 mg

Nitroglycerin

Trade Name

- Sublingual: Nitrostat, Nitrolingual Spray
- IV: Tridil, NITRO-BID IV or IO (inter-facility transport only)

Action

Arterial and venous smooth muscle relaxant

Indications

Chest pain of cardiac origin, Hypertensive emergency, Pulmonary edema and Unstable angina during interfacility transport

Contraindications

- Known sensitivity to nitroglycerin.
- Viagra (sildenafil citrate) use within the preceding 24 hours.
- Tadalafil (Cialis) use within the preceding 48 hours.

Side Effects & Precautions

May cause hypotension or reflex tachycardia, so use caution in patients with blood pressure <100 systolic. Do not shake nitroglycerin spray prior to administration and Nitroglycerin loses its potency with time. Warn patients of throbbing headache, flushing, dizziness and burning under the tongue. **How Supplied**

- 5mg/ml vial (10ml or 25ml)
- Premixed: 200 mcg/ml (50mg/250ml)
- 0.4 mg SL tablets
- 0.4 mg dose spray

Route & Dosage

	Cardiac Chest Pain	Pulmonary Edema	Hypertensive Emergency	Unstable Angina During Inter-Facility Transport Only
EMT	May assist in self- administration of patient's own nitroglycerin for chest pain			
AEMT	• 0.4 mg SL if blood			
EMT-I	pressure >100	0.4 - 0.8 mg		
Paramedic	 systolic. May repeat twice at 3-5 minute intervals as long as blood pressure is >100 systolic 	SL. May repeat twice at 3-5 minute intervals	 0.4 mg SL. May repeat twice at 3-5 minute intervals. If patient uses nitroglycerin regularly, dose may be doubled 	 Titrate IV infusion by 5-10 mcg/min until desired effect. To wean off IV or IO infusion, decrease by 5 mcg every 5-10 minutes until desired response

Norepinephrine

Trade Name

Levophed Action

Primary alpha adrenergic vasoconstrictor

Indications

- Primary treatment of septic, cardiogenic, neurogenic and obstructive shock.
- Not indicated for use in hypovolemic shock.

Contraindications

- Antidepressants such as MAO inhibitors; Parnate, Nardil, Marplan
- May induce tachyarrhythmias, in which case treatment should be reduced or stopped.
- Should not be given with Sodium Bicarb as epinephrine is inactivated by Bicarb.
- Known sensitivity

Side Effects & Precautions

- Causes tissue necrosis in the extravascular space.
- Peripheral vasoconstriction
- Ectopic beats, nausea, and vomiting
- Ineffective in treating Bradycardia

How Supplied

4 mg in 4 ml

Mixing and Dosing Instructions

Add 4 mg to 250 bag of D10 for a concentration of 16mcg/ml. 4mcg/min is 15 drops/min with a 60 drop set.

	Adult Dosing			
	Begin at 4 mcg/min, if no response noted increase every 5 minutes in 4 mcg/min increments to a max dose of 12 mcg/min			
Paramedic	Pediatric Dosing			
	 Begin treatment at 0.1 mcg/kg/min, with no improvement in 5 minutes increase dosing to 0.2mcg/kg/min Continue to increase the dose by 0.2mcg/kg/min every five minutes to a max dose of 2 mcg/kg/min or age appropriate SBP is reached 			

Weight (kg) >	6.5	8.5	10.5	13	16.5	21	26.5	33
0.1 mcg/kg/min	2	3	4	5	6	8	10	12
0.2 mcg/kg/min	5	6	8	10	12	16	20	25
0.4 mcg/kg/min	10	13	16	20	25	32	40	50

Ondansetron

Trade Name

Zofran

Action

Potent anti-emetic agent, a selective 5-HT3 receptor antagonist.

Indications

- Nausea or vomiting
- Prophylactic prevention of nausea or vomiting

Contraindications

- & Known sensitivity to Ondansetron.
- Recent administration of Apomorphine (given SC for Parkinson's Disease) Apomorphine is rarely used may cause severe hypotension

Side Effects & Precautions

May cause minor headache, constipation or diarrhea.

Trade Name

Zofran ODT Action

Anti-emetic agent, selective 5-HT3 receptor antagonist

Indications

- Nausea or vomiting
- Prophylactically to prevent nausea or vomiting

Contraindications

- Known sensitivity to Zofran
- Prolonged OT
- Inability to swallow or otherwise control airway
- Recent administration of apomorphine may result in sever hypotension (Subcutaneous medication for Parkinson's disease)

Side Effects & Precautions

• May cause headache or diarrhea

How Supplied

4 MG Tablet

	Adult Dosing > 12 Years old	
EMT-I	Single 4 MG tablet PO allow to dissolve	
Paramedic	Repeat once in 15 minutes as needed	

Oxygen (O2)

Trade Name

None Action

Essential for normal cellular metabolism and life, and tissue hypoxia causes cell damage and death. **Indications**

- Suspected hypoxemia,
- respiratory distress,
- acute chest pain,
- shock,
- trauma,
- cardiopulmonary arrest,
- inhalation injury,
- altered level of consciousness.

Contraindications

Acute paraquat poisoning.

Side Effects & Precautions

- Supports combustion.
- Possible respiratory arrest in patients with chronic lung disease, but do not withhold oxygen if patient is in respiratory distress.

How Supplied

Gas

EMR EMT AEMT EMT- I Paramedic	1 - 25 liters/minute as needed

Oxymetazoline

Trade Name

Afrin

<u>Action</u>

Potent sympathomimetic arterial constrictor. Indications

- Epistaxis.
- Pretreatment for nasotracheal intubation.

Contraindications

- & Known sensitivity to oxymetazoline.
- Persistent blood pressure greater than 190/110.

Side Effects & Precautions

- Tachycardia,
- myocardial ischemia
- cardiac dysrhythmia.

How Supplied

Spray bottle Route and Dosage

Oxytocin

Trade Name

Pitocin

Action

Polypeptide hormone which stimulates uterine contraction **Indications**

Control of postpartum hemorrhage following delivery of the placenta <u>Contraindications</u>

- & Known sensitivity to oxytocin.
- Pregnancy.

Side Effects & Precautions

- Nausea and vomiting.
- Severe uterine cramps.

How Supplied

10 units/1 ml Route and Dosage

Paramedic	10-20 units added to 1000 ml of normal saline IV and run wide open or as needed to control bleeding
-----------	---

Trade Name

<u>Zemuron</u>

<u>Action</u>

Binds competitively to cholinergic receptors on motor end-plate to antagonize action of acetylcholine, resulting in block of neuromuscular transmission

Indications

<u>To facilitate rapid sequence tracheal intubation and to provide skeletal muscle relaxation</u> <u>during mechanical ventilation when Vecuronium is not available</u>

Contraindications

Bypersensitivity to Rocuronium or other neuromuscular blocking agents.

Side Effects & Precautions

- Conscious patents who receive Rocuronium must receive sedation as it causes paralysis, not analgesia or amnesia.
- Patient will require airway management and ventilation.
- Do not mix Rocuronium with alkaline solutions (like Sodium Bicarb) through the same needle

How Supplied

- Store in solution for injection and must be kept refrigerated at (36° to 46°F). Do not freeze. May be removed from refrigerator and stored at controlled room temperature (less than 77°F), but must be used within 60 days
- 1 ml of solution for injection / infusion contains 10 mg Rocuronium

	Paralyzing Dose	Maintenance Dose
Paramedic	• 1.5 mg/kg IV or IO.	

Trade Name

Sodium bicarbonate

<u>Action</u>

Alkalinizing agent. Raises blood pH. Indications

- Tricyclic antidepressants overdoses with hypotension, dysrhythmias, seizures or QRS > 0.12.
- Hyperkalemia.
- Severe acidosis refractory to hyperventilation.

Contraindications

Alkalosis.

Side Effects & Precautions

- May deactivate catecholamines.
- Precipitates with calcium in IV or IO tubing.
- Decreases chance of brain viability in cardiac arrest.

How Supplied

- 8.4%: 50 mEq/50 ml prefilled syringe
- 4.2%: 5 mEq/10 ml prefilled syringe

	Adult	Pediatric
Paramedic	1 mEq/kg of 8.4% IV or IO. Repeat 0.5 mEq/Kg every 10 minutes	1 mEq/kg of 4.2% IV or IO. Repeat 0.5 mEq/kg every 10 minutes

Succinylcholine Chloride

Trade Name

Anectine

Action

Depolarizing skeletal muscle relaxant.

Indications

• Rapid sequence intubation.

Contraindications

- Known sensitivity to succinylcholine chloride.
- Known severe hyperkalemia
- History of malignant hyperthermia.
- History of stroke, burns, crush injuries > 4 days and < 6 months previously.
- Quadriplegia, paraplegia, muscular dystrophy, multiple sclerosis, amyotrophic lateral sclerosis (ALS) or other neuromuscular disorder of > 4 days duration.

Side Effects & Precautions

- Succinylcholine chloride causes paralysis, not analgesia or amnesia; conscious patients must receive sedation. Patient will require airway management and ventilation.
- Patients with neuromuscular disorders of > 4 days and healed< 6 months duration are at risk for fatal hyperkalemia, as are patients with ongoing neuromuscular disorders, such as muscular dystrophy, multiple sclerosis, or amyotrophic lateral sclerosis.
- Use with caution in patients with renal failure on dialysis who have severe hyperkalemia.

How Supplied

- 200 mg/10 ml premixed
- 200 mg in powder form
- 500 mg (mixed in 50 ml crystalloid)

Paramedic	2 mg/kg IV or IO
-----------	------------------

Vecuronium (Optional)

Trade Name

Norcuron

Action

Non-depolarizing skeletal muscle relaxant.

Indications

- Pretreatment for rapid sequence intubation (defasciculating dose) in the presence of increased intracranial pressure and age ≥ 10 years.
- To provide paralysis (paralyzing dose) for rapid sequence intubation if Succinylcholine is contraindicated.
- To maintain paralysis (maintenance dose) after intubation.
- To relieve isolated Masseter muscle spasm.

Contraindications

& Known sensitivity to Vecuronium.

Side Effects & Precautions

- Sedation is required for all patients who receive Vecuronium.
- Vecuronium causes paralysis, not analgesia or amnesia; conscious patients must receive sedation.
- Patient will require airway management and ventilation.

How Supplied

10 mg/10 ml premixed or

10 mg powdered

	Paralyzing Dose	Maintenance Dose
Paramedic	 0.15 mg/kg IV or IO. Usual adult dose is 10 mg 	 0.01 -0.015 mg/kg 25-40 minutes after initial paralysis, then every 12-15 minutes as needed OR 1 mcg/kg/min IV or IO infusion



Medical Procedures

Section D
12 Lead ECG

Indications

Patients having cardiac chest discomfort, palpitations, syncope, stroke, shortness of breath. EMT judgment that the patient may be having myocardial ischemia or infarction

Precautions

- Do not delay treatment of life-threatening conditions to obtain a 12 lead ECG.
- 12 lead ECG best obtained with the patient not in a moving vehicle.
- Obtain 12 lead ECG before nitroglycerin administration.

- Obtain the 12 lead ECG
- EMR, EMT B, AEMT and EMT-I electronically transmit the ECG results to Sky Lakes ER regardless of findings.
- Label 2 copies of 12 lead ECGs with the patient's name and date of birth. (Most machines will print multiple copies.)
- At the receiving hospital leave one copy of the 12 lead ECG with the receiving physician
- Keep one copy of the 12 lead ECG with your PCR.

EMR EMT AEMT	Obtain and electronically transmit
EMT- I Paramedic	Obtain and interpret

Advanced airway management by EMT through EMT – I or when endotracheal intubation cannot be accomplished by an EMT – P

Precautions

- Do not use device on a patients outside the age and size parameters set by the manufacturer.
- Do not use device on patients with intact gag reflex, known esophageal disease or who have ingested caustic substances.
- EMRs, EMTs and Paramedics must receive specific training for the device they are using before actual field use.

Procedure

- 1. Prepare equipment.
 - a. High flow oxygen
 - b. Bag valve mask
 - c. Supraglottic Airway Device
 - d. Suction
 - e. Lubricant
- 2. Ventilate with bag valve mask or demand valve with supplemental oxygen while preparing equipment.
- 3. Remove dentures, loose or broken teeth to prevent puncture of balloons.
- 4. With the patient's head in a neutral position, by lifting the tongue and lower jaw upward with one hand, insert the airway blindly to the manufacturer's recommended location. Do not force the airway.
- 5. Inflate the balloon or balloons proper amount of air as recommended by the manufacturer
- 6. Place the ventilation device on the primary airway and ventilate while listening for lung sounds and watching for chest rise. If the chest rises, breath sounds are auscultated and no abdominal insufflation occurs, the tube is located correctly. Continue ventilating. Some supraglottic airway device provided access from the secondary tube for removal of gastric air or fluids with a suction catheter.
- 7. If no chest rise occurs, there are absent breath sounds and gastric insufflation is present, follow corrective measures outlined in the manufacturer's recommendations. Confirm ventilations by listening for breath sounds and watching for chest rise.

Steps 6 and 7 are critical to insure that you are ventilating the patient.

- 8. Reconfirm tube location frequently, during transport and whenever patient is moving.
- 9. Blind endotracheal intubation may be performed through or around the device without removing the airway.
- 10. To remove airway, place the patient on their side and deflate balloon(s) and slowly remove the device; have suction ready.

EMR	Assist in set up within their respective scope
EMT AEMT EMT- I Paramedic	Full performance

To establish an emergency airway for the patient who cannot provide or protect their own airway.

Precautions

Lacerations, dental injury, laryngospasm, right or left main stem or esophageal intubation. **Oral:** Rapid Sequence Intubation may facilitate procedure.

<u>Digital</u>: May be successful when other methods have failed. Use bite block to protect EMT's fingers.

- 1. Prepare Equipment
 - a. Laryngoscope and blades
 - b. Endotracheal tube with stylet, average sizes are:
 - Adult female: 6.5 to 8.0
 - Adult male: 7.0 to 8.5
 - Child: 4.0 to 6.0
 - Infant: 3.5 to 4.0
 - Newborn: 2.5 to 3.5
 - c. Suction unit
 - d. Magill forceps
 - e. Endotracheal Tube exchanger (gum bougie)
 - f. Lubricant
 - g. Bite block
 - h. Tube securing device and tape
 - i. Syringe for cuffed tubes
 - j. Afrin
- 2. Hyperoxygenate patient.
- 3. Selleck maneuver if indicated.

EMR	Assist in set up within their respective scope
EMT	
AEMT	
EMT- I	
Paramedic	Full performance
Paramedic	Full performance

To establish an emergency airway as a last resort when other methods have been unsuccessful at maintaining adequate oxygenation; including repeated bag-valve-mask ventilation with repositioning.

Precautions

- Punctures or lacerations of the blood vessels, vocal cords, trachea or esophagus may occur.
- Subcutaneous emphysema

- 1. Prepare Equipment
 - a. High flow oxygen with bag-valve-mask
 - b. Suction
 - c. Disinfectant solution
 - d. Tape
 - e. Stethoscope
 - f. Scalpel
 - g. Quicktrach introducer
- 2. Place the patient supine with support under the shoulders and mild hyperextension of the neck.
- 3. Palpate the neck over the trachea and locate the cricothyroid membrane just below the notch of the thyroid cartilage.
- 4. Clean and prep the site over the membrane.
- 5. Puncture the membrane with the scalpel.
- 6. Insert the tracheal introducer into the distal trachea until it stops at the carina.
- 7. Observe and auscultate the chest for bilateral breath sounds. Secure the device and continue to ventilate.

EMR	Assist in set up within their respective scope
EMT	
AEMT	
EMT- I	
Paramedic	Full performance

Unconscious, unresponsive, pulseless, apneic patient with possible cardiac arrest

Precautions

Adult electrodes if 8 years of age or older and have an estimated body weight of greater than 55 pounds (25 kg) or an estimated height of more than 50 inches. Pediatric wiring and adaptor if 1 - 8 years of age

Procedure

AT NO TIME, including the determination of the underlying rhythm, and the delivery of an appropriate shock, shall CPR cease for more than 45 seconds.

- 1. Prepare Equipment
 - a. AED or SAED device
 - b. Oxygen via bag valve mask or airway
- 2. If this is a witnessed arrest attach the device and go directly to step 4.
- 3. If this is an un-witnessed arrest, perform CPR while attaching the device, then after 2 minutes of CPR
- 4. Allow the device (according to manufacturer's instruction) to analyze the patient and determine if the underlying cardiac rhythm is shockable.
- 5. If the device determines that a shock is necessary, allow the device to deliver the initial shock (SAED manually deliver) according to manufacturer's specifications.
- 6. Immediately after any shock, is delivered, commence CPR for 2 minutes.
- 7. If the patient remains unconscious after the 2 minutes of CPR, check the patients pulse.
- 8. If no pulse is felt, allow the device (according to manufacturer's instruction) to analyze the patient and determine if the underlying cardiac rhythm is shockable.
- 9. Continue the cycle of 2 minutes of CPR followed by analyzing the patient and shocking as indicated at the energy level specified by the device's manufacturer.

WHEN THE DEVICE IS ANALYZING THE PATIENT OR DELIVERING THE SHOCK, MAKE ABSOLUTELY CERTAIN THAT NO ONE IS IN CONTACT WITH THE PATIENT OR THE EQUIPMENT.

EMR	
EMT	
AEMT	Full performance
EMT-I	
Paramedic	

Rapid decompression of tension pneumothorax, which may result from trauma, chest compressions or positive pressure ventilation; Signs include unilaterally absent breath sounds, hypotension, progressive respiratory distress, distended neck veins, asymmetrical breathing, hyper-expanded chest, tracheal shift and increased resistance to ventilation. In a patient who has suffered significant chest trauma, a tension pneumothorax may be present without specific signs. In such a patient, chest decompression may be useful for cardiac arrest, PEA, or severe respiratory distress.

Precautions

Pneumothorax or lacerations of the lung or blood vessels may occur. Chest decompression may need to be performed at more than one site or on the other side. Relief of a tension pneumothorax should result in a rapid and significant improvement in the patient's condition.

- 1. Prepare Equipment
 - a. High flow oxygen.
 - b. 14 16 ga (5 8 cm long) IV catheters.
 - c. 10 ml syringe.
 - d. Disinfectant solution.
 - e. Tape.
 - f. One way valve *(optional)*.
- 2. With the patient supine and the chest exposed, clean the second or third intercostals space in the mid-clavicular line. Insert the IV catheter over the top of the third or fourth rib see diagram below. Slide over the top of the rib, advance the catheter until a "pop" is felt and air released. Advance the catheter and remove the needle and syringe. For prolonged transport attach the one way valve to the hub of the catheter and secure with tape. Auscultate the chest and administer 100% oxygen.



EMR	Assist in set up within their respective scope
EMT	
AEMT	
EMT-I	
Paramedic	Full performance

Respiratory distress in conscious patient suffering from: pulmonary edema, asthma or CHF when done in conjunction with, or before, nitroglycerin therapy or for dyspnea from COPD.

Precautions

- Requires a cooperative, spontaneously breathing, patient with normal ventilatory drive
- May increase oral secretions
- Increased intracranial pressure.
- Extraordinarily high CPAP pressures can cause a decrease in venous return to the heart from high intrathoracic pressures resulting in decreased cardiac output.
- High alveolar pressures can cause an overextension of alveoli, resulting in barotrauma and or increase intrapulmonary shunting.
- Over distension of the lungs can reduce compliance.

Contraindications

- Age < 12 years
- Unconscious or uncooperative
- Respiratory failure with a need for immediate intubation and or BVM ventilation
- Facial deformity preventing adequate mask seal over the mouth and nose
- Respiratory rate < 25/minute
- Systolic blood pressure < 90 mm Hg
- Untreated pneumothorax
- Vomiting
- Upper airway abnormalities or trauma
- Tracheostomy used for normal respirations (plugged tracheostomy is not a contraindication)

- 1. Have the patient in an upright position of comfort.
- 2. Explain the procedure to the patient.
- 3. Instruct patient to breathe in through their nose slowly and exhale slowly out through their mouth.
- 4. Apply Oxygen to the CPAP mask: fixed flow generator system or venturi system according to the manufacturer's specifications at 10 cm H₂O.
- 5. Place the delivery mask over the mouth and nose and secure the mask with straps.
- 6. Consider placement of a nasopharyngeal airway.
- 7. If patient's respiratory status or level of consciousness deteriorates, remove the CPAP mask, provide bag-valve-mask ventilation, and consider advanced airway management.
- 8. Monitor patient's respiratory status, vital signs, oximetry, and capnometry (scope dependent).
- 9. Continue CPAP until transfer to the hospital ED staff unless patient is unable to tolerate the CPAP or the patient's clinical condition worsens despite CPAP use.

EMR	Assist in set up within their respective scope
EMT AEMT EMT- I Paramedic	Full performance

End Tidal CO2 Detector

Indications

Any patient receiving ventilation through an artificial airway (endotracheal tube, supraglottic airway device)

Precautions

- Use the pediatric detector on patients weighing less than 15 kg.
- After administering medications through endotracheal tube wait for 6 ventilation cycles before re-attaching detector.
- CO₂ detector is to be used to confirm proper endotracheal intubation, supraglottic airway device placement in addition to direct laryngoscopic airway visualization, proper insertion techniques, observation of chest rise and skin color, and auscultation of bilateral breath sounds.

Procedure

Manual Colorimetric Detector:

- 1. Attach the CO2 detector between the bag-valve device and the end of the endotracheal tube, supraglottic airway device.
- When ventilating properly and the endotracheal tube, supraglottic airway device is in the proper location, the indicator area on the detector will change color at time of expiration depending on the manufacture, typically yellow (~5% CO2) during expiration and purple (0% CO2) during inspiration.

Electronic Detector:

- 1. Attach the 15mm adapter between the bag-valve device and the endotracheal tube, supraglottic airway device.
- 2. Attach the small tubing to the electronic detector.
- 3. To confirm proper placement during ventilation the output reading during expiration should measure between 35mm and 45mm Hg (5% CO2) during expiration in conjunction with the regular rise and fall of the CO2 waveform.

EMR	Assist in set up within their respective scope
EMT AEMT EMT- I Paramedic	Full performance

Endotracheal Intubation

Indications

To establish an emergency airway for the patient who cannot provide or protect their own airway.

Precautions

Lacerations, dental injury, laryngospasm, right or left main stem or esophageal intubation. Rapid Sequence Intubation may facilitate procedure.

- 1. Prepare Equipment
 - a. Laryngoscope and blades (video laryngoscope if available)
 - b. Endotracheal tube with stylet, average sizes are:
 - Adult female: 6.5 to 8.0
 - Adult male: 7.0 to 8.5
 - Child: 4.0 to 6.0
 - Infant: 3.5 to 4.0
 - Newborn: 2.5 to 3.5
 - c. Suction unit.
 - d. Magill forceps.
 - e. Endotracheal Tube exchanger (gum bougie)
 - f. Tube securing device and tape.
 - g. Syringe for cuffed tubes.
- 2. Hyperoxygenate patient.
- 3. Selleck maneuver if indicated.
- 4. Open patient's airway, protecting the cervical spine.
- 5. Insert endotracheal tube into trachea.
- 6. Use endotracheal tube exchanger to facilitate intubation if needed. Insert curved tip through vocal cords, gently advance into trachea approximately 2-3 cm, feel the tip of the endotracheal tube exchanger tapping tracheal rings to confirm tracheal placement. Carefully advance endotracheal tube over the endotracheal tube exchanger until it is at the appropriate tip-lip distance. Remove endotracheal tube exchanger.
- 7. Post Intubation:
 - a. Inflate cuff if present.
 - b. Verify tube location by auscultation and observation.
 - c. Secure tube.
 - d. Ventilate patient.
 - e. Frequently reconfirm tube location.
 - f. End tidal CO2 capnometry.

EMR EMT AEMT EMT- I	Assist in set up within their respective scope.
Paramedic	Full performance

Symptomatic bradycardia refractory to atropine, symptomatic heart block and asystole

Contraindications

Patients with penetrating or blunt trauma

Precautions

This is a painful procedure. Consider pain medication and sedation.

- 1. Prepare Equipment
 - a. High flow oxygen.
 - b. Pacemaker, cable and pacing electrodes.
 - c. Diazepam, Midazolam (Versed) or morphine.
- 2. Administer oxygen and monitor cardiac rhythm. Three lead cardiac monitor must be attached for pacing.
- 3. Medicate patient.
- 4. Apply pacer pads to the left anterior chest and left posterior chest (preferred), or right anterior chest and left lateral chest.
- 5. Adjust cardiac monitor gain to sense intrinsic QRS complexes.
- 6. Set mA at 0; attach pacer pads to monitor cable.
- 7. Set pace rate at 80 bpm.
- 8. Increase current by 20 mA to obtain capture.
- 9. Insure mechanical capture by obtaining pulse and blood pressure.

EMR	Assist in set up within their respective scope
EMT	
AEMT	
EMT-I	
Paramedic	Full performance

Prevention of Flu.

Precautions

- Defer for patients with moderate or severe acute illness.
- Caution for nursing mothers as it is not known whether the vaccine is excreted in human milk.
- Do not administer the Seasonal and H1N1 vaccine at the same visit.
- If nasal congestion would impede vaccine delivery to nasopharyngeal.

Contraindications

- History of Guillain-Barre' syndrome.
- History of a severe allergic reaction to a previous influenza vaccination
- History of anaphylactic reactions to eggs, egg proteins, gentamicin, gelatin or arginine.

Procedure

Note: Each sprayer contains a single dose and about ½ of the contents should be administered into each nostril. Do not inject. Do not use a needle. Active inhalation or sniffing is not required by the patient during the vaccination process.

- 1. Remove the rubber tip protector, but not the dose-divider clip.
- 2. With the patient in an upright position, place the tip just inside the nostril to ensure the vaccine is delivered into the nose.
- 3. Deliver the vaccine intranasally with a single motion, depress plunger as rapidly as possible until the dose-divider prevents you from going further.
- 4. Pinch and remove the dose-divider clip from the plunger.
- 5. Repeat steps three and four in the second nostril.

EMR EMT AEMT	Assist in set up within their respective scope
EMT- I Paramedic	Full performance

When vascular access is necessary, but otherwise unattainable in a patient; use of EZ-IO requires transport of the patient to the hospital.

Contraindications (use alternate site)

- Infectious tissue at the insertion site.
- Fracture of the bone proximal to the insertion site.
- Excessive tissue at the insertion site must see 5mm mark on needle (nearest the flange) outside of skin when needle tip touches the bone.
- Previous significant orthopedic procedure or prosthesis at the insertion site.

Precautions

- Only one attempt per bone
- IO infusion in a conscious patient may be painful use lidocaine IO during initial infusion.

Procedure

- 1. Locate appropriate insertion site and prepare using aseptic technique
 - a. Proximal tibia flat portion of the anteromedial tibia distal to tibial tubercle
 - b. Distal tibia 3 cm proximal to the medial malleous
 - c. Proximal humerus
- 2. Prepare the EZ-IO driver and appropriate needle set.
 - a. EZ-IO AD (40 kg and over), if patient is larger than the Broselow tape
 - b. EZ-IO PD (3 39 kg), if patient fits on the Broselow tape
- 3. Stabilize site and insert appropriate needle set using the EZ-IO driver until
 - a. Sudden decrease in resistance is felt OR
 - b. Needle flange reaches the skin
- 4. Remove EZ-IO driver from needle set while stabilizing catheter hub
- 5. Remove stylet from needle set and and discard in a sharps container
- 6. Connect primed EZ-Connect® extension tubing prime with cardiac lidocaine 2% (Preservative Free) if patient is conscious; normal saline if unconscious
- 7. Attach a 3- way stop cock to the EZ-Connect extension tubing for all pediatric patients (when using the PD needle)
- 8. Slowly administer 0.5 mg/kg of cardiac lidocaine 2% IO to conscious patients. Flush EZ-IO with lidocaine or normal saline (AD 10cc; PD 5cc).
- 9. Confirm placement with free flow of IO infusion without extravasations.
 - a. Note any of the following confirmation signs of intraosseous placement:
 - b. Needle 90° to skin and firmly seated in the bone
 - c. Spontaneous flow of blood or marrow into the EZ-Connect hub
 - d. Aspiration of blood or bone marrow with syringe
- 10. Syringe bolus or utilize 300 mm Hg pressure bag or infusion pump for infusions.

Continued on next page

- 11. Secure tubing to patient, dress site, apply additional stabilization if catheter hub is not flush with the skin, and apply wristband
- 12. Monitor EZ-IO site and patient condition for signs of extravasation.
- 13. Within 24 hours replace the EZ-IO with intravenous access.

EMR EMT	Assist in set up within their respective scope
AEMT	Proximal tibia only
EMT- I Paramedic	Full performance

When IV access is unattainable in a critically ill or injured patient

Precautions

Only one attempt per limb; avoid growth plate, infection at insertion site and fractured limbs.

- 1. Prepare Equipment
 - a. Intraosseous needle:
 - i. 18 ga for patients 18 months and younger
 - ii. 15 ga for patients older than 18 months
 - b. Disinfectant solution.
 - c. Two 5 ml syringes.
 - d. Crystalloid.
 - e. Sterile gauze pads.
 - f. Tape.
 - g. Three way stopcock.
 - h. 60 ml syringe.
 - i. Extension tubing.
- 2. The preferred insertion site is the proximal tibia; the anteromedial flat surface 1-3 cm distal to the tibial tuberosity.
- 3. Alternate sites are the medial malleolus of the tibia or the anterior aspect of the distal femur.
- 4. Prepare surface with disinfectant solution.
- 5. Penetrate the soft tissue and with a twisting motion penetrate the cortex of the bone until a pop or loss of resistance is felt.
- 6. Remove the stylet. While holding the needle firmly, attempt to aspirate marrow or blood you may not be able to aspirate anything even if the needle is in the marrow.
- 7. If you think that the needle is in the marrow, infuse 5 to 10 ml of crystalloid while palpating for infiltration.
- 8. Secure needle.
- 9. Attach extension tubing.
- 10. Attach stopcock to extension tubing.
- 11. Attach IV solution to stopcock.
- 12. Use 60 ml syringe to administer fluid bolus.
- 13. Flush frequently with 5-10 ml to maintain patency.

EMR EMT	Assist in set up within their respective scope
AEMT	Proximal tibia only
EMT- I Paramedic	Full performance

To access venous circulation

Precautions

- Do not attempt at areas of injury or infection.
- Splinting devices may be needed to limit motion.
- Monitor the IV site for signs of infiltration.
- Do not attempt external jugular catheterization unless the vein is visualized.

Procedure

1. Prepare equipment

- a. Disinfectant solution.
- b. Tourniquet.
- c. Crystalloid solution and infusion set OR saline lock.
- d. Intravenous catheter.
- e. Sterile dressing.
- f. Syringe.

2. Extremity Vein

- a. Disinfect the largest, most appropriate site.
- b. Apply the tourniquet.
- c. Insert catheter at an angle until blood returns.
- d. Advance the catheter into the vein while removing the needle.
- e. Attach and irrigate with crystalloid or saline lock.
- f. Secure catheter and monitor for infiltration.

3. External Jugular Vein

- a. Position patient with head turned to side opposite vein.
- b. Disinfect site.
- c. Apply finger pressure above clavicle to occlude vein.
- d. Insert catheter caudally at an angle until blood returns.
- e. Confirm intravascular location, attach infusion set and secure catheter.

EMR EMT	Assist in set up within their respective scope
AEMT EMT- I Paramedic	Full performance

- Any pediatric patient who has received assisted ventilation.
- Any intubated patient receiving air transport.
- Any patient receiving a supraglottic airway device with confirmed esophageal placement.
- To prevent or alleviate abdominal distention in an intubated patient
- Significant poisoning

Contraindications

- Nasogastric intubation in a patient with obvious skull fracture or severe facial injuries
- Any gastric intubation in a patient with ingestion of caustic substances or known esophageal varices.

Procedure

- 1. Prepare equipment.
 - a. Gastric tubes:

Less than 1 year	5-8 Fr
Pediatric	10-14 Fr
Adult	16-18 Fr

- b. Lubricant.
- c. Large syringe.
- d. Afrin for nasogastric intubation, optional.

1. Orogastric - EMT - Intermediate

- a. An EMT-I may only place an orogastric tube after the placement of a supraglottic airway device.
- b. The supraglottic airway device **MUST** be confirmed to be an esophageal placement.
- c. With the BVM on Tube #1, insert the orogastric tube down Tube #2.
- d. Confirm stomach placement by instilling air and listening to the epigastrium.
- e. Secure tube.
- f. Connect to suction at 80 120 mm Hg.

2. Orogastric - PARAMEDIC

- a. Measure tube from tip of nose to xiphoid process.
- b. Insert tube into mouth and advance into stomach.
- c. Confirm location by instilling air and listening to the epigastrium.
- d. Secure tube.
- e. Connect to suction at 80 120 mm Hg.

Continued on next page

3. Nasogastric - PARAMEDIC

- a. Measure tube length from earlobe to tip of nose and then to xiphoid process.
- b. Select the most open nostril for placement and spray nostril with Afrin.
- c. Insert the lubricated tube directing it posteriorly and slide it along the nasal pharynx into the esophagus and into the stomach.
- d. Confirm location by instilling air and listening to the epigastrium.
- e. Secure tube.
- f. Connect to suction at 80 120 mm Hg.

	Orogastric	Nasogastric	
EMR EMT AEMT	Assist in set up within their respective scope	Assist in set up within their respective scope	
EMT- I	Full performance		
Paramedic		Full performance	

Nebulizer Setup

Indications

Bronchospasm due to COPD exacerbation, CHF, asthma or anaphylaxis

Precautions

Patients may not tolerate a specific administration method, face mask, mouth piece or blow-by.

- 1. Prepare equipment.
 - a. Oxygen source.
 - b. Nebulizer system.
 - c. Medication.
- 2. Assemble nebulizer T-piece device and attach to oxygen source.
- 3. Add desired medication to nebulizer.
- 4. Run oxygen at 6-10 liters/minute.
- 5. Attach nebulizer T-piece to mouthpiece, face mask or endotracheal tube.

EMR	Assist in set up within their respective scope
EMT AEMT EMT- I Paramedic	Full performance

Pelvic Sling

Indications

Stabilization of suspected unstable pelvis fractures.

Precautions

Once applied, the pelvic sling is to be removed only under the supervision of a physician.

- 1. Remove patient's clothes which will be covered by the pelvic sling.
- 2. After visual examination, the pelvic sling is wrapped around the patient's pelvis hips & buttocks (not abdomen). The pelvic sling is then tightened and securely fastened anteriorly over the pubic symphysis to reduce motion and internal hemorrhage of the unstable pelvis fracture during transport to the hospital. Provide further immobilization by placing the patient on a backboard and strapping the patient's knees together and the ankles together.
- 3. Specific directions and training will depend on the type of pelvic sing used by the agency.
- 4. Acceptable methods include:
 - a. Bed sheet
 - b. Commercial devices, such as the SAM Sling®

EMR	
ЕМТ	
AEMT	Full performance
EMT- I	
Paramedic	

The recommended method to establish an airway when other methods have been unsuccessful

Precautions

- Punctures or lacerations of the blood vessels, vocal cords, or esophagus may occur.
- Subcutaneous emphysema

- 1. Prepare Equipment requires 2 personnel
 - a. Bag-valve-mask and oxygen
 - b. Suction
 - c. Emergency cricothyrotomy Set
 - d. Disinfectant solution
 - e. Tape
 - f. Stethoscope
- 2. Follow guidelines and instructions included in the emergency cricothyrotomy set.

EMR EMT AEMT EMT- I	Assist in set up within their respective scope
Paramedic	Full performance

Patient Restraint

Indications

- To restrain a physically combative patient to facilitate proper medical care and transport
- Patient restraint (physical or chemical) should be used when a patient is exhibiting combative behavior or is a danger to self or others.
- Physical or chemical restraint is only to be used to transport a patient under the Implied Consent law, a police arrest or hold, or a physician hold, in which the patient requires ambulance transport for medical treatment or evaluation.

Precautions

- Positional asphyxia can occur when a patient's body positioning causes an inability to breathe or an airway obstruction. This is especially true in the prone position. This may cause apnea, especially in the drugged, physically exerted patient.
- Restraints that are too tight may cause permanent vascular or nerve damage. Handcuffs or flex cuffs applied by law enforcement personnel prior to EMS arrival may be left on providing EMS personnel have the keys, but should be replaced with softer restraints if possible.
- Use caution with sedative agents on patients who have had a chemical irritant sprayed in their face as airway irritation or laryngospasm may occur.

- 1. Sufficient manpower should be present to control patient without injuring the medical personnel. Assess the need for using physical restraints prior to administering a chemical restraint.
- 2. Restrain the patient on the stretcher in either a supine or lateral recumbent position to keep airway open and accessible. Immobilize patient with appropriate spine precautions if indicated for possible spinal injury.
- 3. Document circulatory status of physically restrained extremities frequently.
 - a. Have haloperidol, midazolam or diazepam prepared for injection.
- 4. All four extremities should be secured even if chemical restraint has been effective, to protect the EMS personnel and the patient from harm.
- 5. Monitor vital signs frequently.

EMR	Physical restraint only		
ЕМТ			
AEMT			
EMT- I			
Paramedic	Physical and chemical restraint		

Unconscious, unresponsive, pulseless, apneic patient with cardiac arrest

Precautions

Patient must be 1 year of age or older.

Procedure

- 1. Public Use AED will be acquired and maintained, according to the manufacturer's instructions.
- 2. The following information will be provided at the location of the Public Use AED:

Public Use AED (Automatic External Defibrillator)

This public use AED, located at:

Was acquired and is maintained, according to the manufacturer's instructions, by:

Agency Name

Phone

- 1. Is to be used only by a person who has received instruction through a course approved by the Health Division of the Department of Human Resources
- 2. Is to be used only on an unconscious person who is not breathing and does not have a pulse
- 3. Any time the Public Use AED is used, the "Public Use AED Event Information" page (on the reverse side of the page) must be completed and the data card information sent immediately to the receiving hospital and for QA process by the participating EMS agency, if available

Public Use AED Event Information Please fill out the following information and forward it to the receiving hospital with the patient.

Event Date: / / Time:			-
Patient Name:			(If Known)
Rescuer Name:			-
Rescuer Address:			
Rescuer Phone:			
Mark the correct answer:			
Was CPR performed by a by-stander prior to EMS arrival?	Yes	No	Unknown
Did someone witness the patient go unconscious or arrest?	Yes	No	Unknown
Was shock indicated?	Yes	No	Unknown
Did the rescuer administer any shocks?	Yes	No	Unknown
What was the number of shocks delivered? If any:			
Run #:			
AED Manufacturer and Model:			
Public Use AED Agency:			
Form Completed By:			
Signature:	Date:	/	/

The preferred method to provide endotracheal intubation after inducing unconsciousness and motor paralysis with medications

Precautions

- Must have an alternate method of airway management available
- Succinylcholine chloride may cause malignant hyperthermia or fatal hyperkalemia.
- Paralysis does not stop the brain's seizure activity.
- This is a two person procedure.

- 1. Preparation
 - a. IV, cardiac monitor and SpO₂ monitor.
 - b. Suction.
 - c. Laryngoscope, ET tubes (2 sizes), stylet.
 - d. Medications drawn up and labeled
 - e. Alternate airways BVM, supraglottic airway device, percutaneous cricothyrotomy.
- 2. Pre-oxygenation
 - a. Hi flow oxygen with non-rebreather mask or bag-valve-mask to maximize the patient's SpO2 3 minutes or 8 full breaths
- 3. Premedication (optional depending on urgency)
 - a. Lidocaine 1.5 mg/kg IV push if increased intracranial pressure or bronchospasm.
 - b. Atropine 0.02 mg/kg (minimum dose 0.1 mg) IV push for all children < 10 years.
 - c. Vecuronium 0.01 mg/kg IV push if increased intracranial pressure and age > 10.
- 4. Paralysis with induction
 - a. Etomidate 0.3 mg/kg IV push (0.15 0.2 mg/kg IV if elderly, debilitated or hypotensive) OR Versed 0.1-0.3 mg/kg IV, with max of 10 mg for adults/ 0.05-0.1 mg/kg IV, with a max 10 mg for children
 - b. Succinylcholine 2 mg/kg (preferred) or Vecuronium 0.15 mg/kg IV push
- 5. Protection and positioning
 - a. Selleck's maneuver until endotracheal tube placed, confirmed & secured.
 - b. Patient's head in sniffing position
 - c. BVM ventilation only if SpO2 < 90%.
- 6. Placement and proof
 - a. Inflate balloon & secure tube.
 - b. End tidal CO2 device & auscultation
- 7. Post-intubation management
 - a. Midazolam or diazepam for sedation
 - b. Vecuronium for paralysis.

EMR	Assist in set up within their respective scope
EMT	
AEMT	
EMT-I	
Paramedic	Full performance

Used to administer diazepam in patients when IV access is unavailable

Contraindications

Known sensitivity to diazepam

Precautions

- Causes respiratory depression
- Provides for rapid administration, but requires higher dose to compensate for diminished absorption.

- 1. Prepare Equipment
 - a. Airway control devices
 - b. High flow oxygen
 - c. Diazepam
 - d. 8 Fr feeding tube or long IV catheter
 - e. KY jelly
 - f. Syringe with 3 ml crystalloid or air flush
- 2. Draw up diazepam dosage.
- 3. Remove needle from syringe
- 4. Cut feeding tube to approximately 2.5 inches in length or use IV catheter and remove needle from catheter
- 5. Apply KY jelly to tube or catheter
- 6. Spread buttocks and gently insert feeding tube or catheter into rectum (1" for infants, 1½ 2" for older children). Catheter or feeding tube should advance easily into rectum.
- 7. Attach syringe with diazepam to end of feeding tube or catheter and inject diazepam with a steady push
- 8. Clamp feeding tube or catheter while drawing 2-3 ml of air for flush
- 9. Remove feeding tube or catheter.

EMR			
EMT			
AEMT	Assist in set up within their respective scope		
EMT-I			
Paramedic	Full performance		

Based on the criterion outlined below, suspected spinal injuries are treated using two different procedures. First, patients at risk of unstable spinal injuries are completely immobilized, and second are patients that meet the criteria for spinal motion restriction.

Any patients may be placed on backboards on scene for ease of patient movement and extrication but if not indicated, they should be removed from the backboard as soon as appropriate.

Full Spinal Immobilization Criterion

For patients with blunt trauma or high energy impact with any one of the following, or if any of the following cannot be accurately assessed:

- 1. Altered level of consciousness, use of intoxicants, difficulty communicating, or
- 2. Distracting painful injury, or
- 3. Significant midline spine pain, tenderness, new spine deformity, or
- 4. Motor or sensory deficit such as numbness or weakness.

Spinal Motion Restriction Criterion

For patients with blunt trauma or high energy impact that do not meet the above criterion, but meet at least one of the following criterions: (Patient may, or may not, be ambulatory on scene.)

- 1. Age > 65 years, or
- 2. Penetrating injury of the head, neck or torso without evidence of spinal injury, or
- 3. Mild to slight midline spine pain or tenderness, or
- 4. Parasthesias "stingers"

Non-Indication

Spinal immobilization is not indicated for trauma patients under age 65 who meet ALL FIVE of the following criterion:

- 1. Low energy trauma mechanism (e.g. low speed rear end MVC or ground level fall), and
- 2. Normal level of consciousness (GCS = 15) and able to communicate well, and
- 3. Ambulatory at the scene, and
- 4. No numbness or weakness, and
- 5. No spine pain, tenderness, or new deformity.

Precautions

The use of a backboard and C-collar may be detrimental in some circumstances, as collars may cause pain or airway impingement, and the use of a backboard for spinal immobilization may cause discomfort, decrease local tissue perfusion, or restrict respirations.

Continued on next page

<u>Treatment</u>

Full Spinal Immobilization

- 1. Baseline history and exam shows that the patient meets criteria full spinal immobilization.
- 2. Check peripheral motor, sensory, and perfusion prior to immobilizing patient.
- 3. Manual cervical spinal motion restriction followed by a device or devices that maintain stability.
- 4. The patient may be placed in an extrication device prior to full spinal immobilization.
- 5. The patient is secured to a full spinal immobilization device such as a long board.
- 6. Check peripheral motor, sensory and perfusion after patient is immobilized.

Spinal Motion Restriction

- 1. Baseline history and exam shows that the patient meets criteria spinal motion restriction.
- 2. Check peripheral motor, sensory, and perfusion.
- 3. Manual cervical spinal motion restriction followed by a device or devices that maintain stability.
- 4. Without undue patient discomfort or distress, place the patient in the supine position on an ambulance gurney mattress and secured by the gurney straps. Custom spinal motion restriction measures may be required such as patients presenting with:
 - a. Kyphosis, which is an exaggerated rounding of the back most common with elderly.
 - b. Rigidity due to disease or surgery that can caused the vertebrae to fuse together
 - c. Significant blunt trauma, or severe facial injury or bleeding with airway patency maintained by the patient lying on his/her side or sitting up.
- 5. Maintain motion restriction during patient transfers

Synchronized Cardioversion

Indications

Serious signs or symptoms, including:

- <u>Tachycardia with ventricular rate > 150</u>
- <u>Altered level of consciousness but may not be unconscious</u>
- Hypotension
- <u>Respiratory distress</u>
- Tachycardia (narrow or wide complex)

Tachycardia with serious signs or symptoms

Precautions

Efforts should be made to perform cardioversion on sedated patients who have been given pain medication.

<u>Treatment</u>

- 6. Sedation with Midazolam or Diazepam
- 7. Analgesia with Morphine or Fentanyl
- 8. Synchronized Cardioversion 100, 200, 300, 360 joules or the equivalent biphasic,
 - a. PSVT or atrial flutter may respond to 50 joules
- 9. Unsynchronized Cardioversion

EMR EMT AEMT EMT- I	Assist in set up within their respective scope
Paramedic	Full performance

Tazer Dart Removal

Indications

Conscious and alert patients who have been shot by a TAZER dart in areas that have little to no risk of underlying structural damage or long term complications.

Precautions

For darts that are penetrating near the knee and elbow joint consider the possibility of puncture of the joint space. These cases must be transported so the joint space can to be cleaned and flushed.

Contraindications

Transport the patient and do not remove darts in the following areas:

- Head
- Neck
- Genitalia
- Nipples
- Female Breast
- Penetration into Joint Space

- 1. Assess location of the TAZER dart to ensure removal can be done without complications.
- 2. Assess dart to determine if shank has a mark that indicates the direction of the barb.
- 3. If assessment allows, remove dart.
 - If the dart has a barb indicator, remove the dart pulling away from the barb as you pull the dart out. Use a fish hook motion.
 - If the dart does not have a barb indicator, twist the dart slightly to avoid removing tissue with the barb.
- 4. Treat the wound for localized bleeding if appropriate.

EMR	Assist in set up within their respective scope
EMT AEMT EMT- I Paramedic	Full performance

Tracheostomy Care

Indications

Tracheostomies must be open and unobstructed in order for a patient to breathe. Tracheostomy crises will develop for a variety of reasons: occlusion from mucus plug, accidental removal of tracheostomy or placement of tracheostomy into a false passage. Family members usually have extra supplies at the house.

Precautions

When placing a whole tracheostomy tube into the stoma you may inadvertently insert into the soft tissue and create a false passage. Patients may require intubation through the stoma in order to secure airway.

- 1. Prepare Equipment
 - a. Bag-valve-mask.
 - b. Oxygen.
 - c. Tracheal suction catheter.
 - d. Brand new Tracheostomy tube.
 - e. Endotracheal tube.
- 2. Assess patients breathing.
- 3. Apneic patient.
 - a. Attach bag valve mask to tracheostomy tube and attempt to ventilate; continue this way if adequate.
 - b. If inadequate, attempt to suction tracheostomy with sterile technique.
 - c. Re-ventilate.
 - d. If no improvement, remove inner cannula and suction tracheostomy tube.
 - e. Re-ventilate.
 - f. If no improvement, remove the whole tracheostomy tube.
 - g. Cover stoma and attempt to ventilate with bag-valve-mask over mouth.
 - h. If this works, place a brand new tracheostomy tube, if available, and attempt to ventilate. If this works, continue.
 - i. If does not work, intubate orally. Cover stoma and continue to ventilate.
- 4. Breathing but ventilating poorly.
 - a. Suction Tracheostomy tube with sterile technique.
 - b. If no improvement, remove inner cannula.
 - c. Reassess.
 - d. If no improvement, remove the whole tracheostomy tube and insert a brand new tracheostomy tube. If no tracheostomy tube is available, cut an ET tube to same length as patient's tracheostomy tube and pass through stoma.
 - e. Reassess.
 - f. Ventilate or oxygenate as needed.

EMR	Assist in set up within their respective scope
EMT	
AEMT	
EMT-I	
Paramedic	Full performance

Transport Ventilator

Indications

Any patient requiring short-term ventilatory support while being monitored by a Paramedic/RN trained in the use of the ventilator.

Contraindications

- Patients requiring greater than 50 cmH2O
- Auto Vent 3000 Patients under 20 Kg
- RespirTech PRO Patients under 40 Kg

Precautions

- Do not leave patients unattended.
- Transport ventilators are for resuscitation management and should not be used as an unattended automatic ventilator.
- Recognize changes in atmospheric pressure and altitude as it effects tidal volume.
- Trauma patients with a possible pneumothorax

- 1. Intubate patient and confirm placement.
- 2. Continue with manual ventilations.
- 3. Prepare equipment.
 - a. High flow oxygen.
 - b. Prepare ventilator.
 - c. Check peak pressure.
- 4. Set Breaths per minute (BPM).
 - a. 12 for an Adult; 20 for a Child
- 5. Set inspiratory time (if equipped).
- 6. Set tidal volume (8-10 ml/kg)
 - a. Auto Vent 3000 -- 8-10 ml/kg
 - b. RespirTech Pro 35 cm H₂O
- 7. Occlude the outlet port (check peak pressure)
- 8. Connect to patient.
- 9. Assess patient, Chest rise and fall, Lung sounds, Oximetry (O₂ saturation), End tidal CO₂ capnometry.
- 10. Change in the patient's lung compliance may result in ventilatory changes. In such an event, reassess and make the appropriate clinical adjustments.

EMR	Assist in set up within their respective scope
EMT	
AEMT	
EMT- I	
Paramedic	Full performance

Preferred site of vascular access during neonatal resuscitation

Precautions

- Sterile procedure
- Cannulate the umbilical vein, not the umbilical arteries.
- Do not insert the cannula more than 6 cm.

- 1. Prepare Equipment
 - a. 5 Fr umbilical catheter or 2" 16 ga IV catheter without needle.
 - b. Three-way stopcock.
 - c. Syringe.
 - d. Scalpel.
 - e. Disinfectant solution.
 - f. Crystalloid.
 - g. Sterile gauze pad.
 - h. Tape.
 - i. Umbilical tape or ligature.
 - j. Sterile drape.
- 2. Attach crystalloid filled syringe and three-way stopcock to umbilical catheter and flush.
- 3. Sterile prep and drape the cord area.
- 4. Apply mild ligature pressure to umbilical cord near skin to prevent bleeding.
- 5. Cut the cord approximately 2 cm from the skin, leaving a clean, smooth end.
- 6. Insert catheter in the large, thin-walled, single vessel for 2 cm then check for blood return. If no blood returns keep advancing in 1 cm increments until blood return or catheter has been inserted 6 cm. Do not use catheter if no blood return.
- 7. If blood returns, secure catheter with tape, cover with gauze pad.
- 8. Frequently flush with 1-2 ml crystalloid.

EMR	Assist in set up within their respective scope
EMT	
AEMT	
EMT-I	
Paramedic	Full performance

Narrow complex tachycardia in stable patients

Contraindications

An unstable patient, patient refusal, altered mental status, or any cardiac dysrhythmia except for a narrow complex tachycardia.

- 1. Trendelenburg position
 - a. Raise patient's feet 6-18 inches relative to his or her head.
- 2. Increased intra-abdominal pressure
 - a. Ask the patient to cough
 - b. Ask the patient to close his or her mouth and bear down "like having a bowel movement", "like having a baby", "like blowing up a balloon" or "tighten up your stomach muscles and push".
- 3. Vagal stimulation
 - a. Ask the patient to swallow water.
 - b. Ask the patient to splash ice water on his or her face.

EMR EMT AEMT	Assist in set up within their respective scope
EMT- I Paramedic	Full performance



Mass Casualty Incident (MCI) Protocols

Section E

Introduction

This plan has been prepared to provide a management plan for coordinated response to the single or multiagency MCI, This plan is meant to give guidance to the Incident Commander (IC), Medical Branch Director, Triage, Treatment and Transport Group Supervisors, and the Staging Area Manager. The duties for specific positions that are outlined in this plan can be made into checklists to be used on scene or for reference during an MCI.

Under these orders, the MCI scene shall be managed using the National Incident Management System (NIMS) form of the Incident Command System (ICS). Command Staff and General Staff positions are filled as needed, dictated by the complexity of the incident, and the "span of control" rule of supervising 3 – 7 people. The positions outlined within this plan are activated when the IC or their designee assigns a person to a position and delegate duties to them.

The IC is responsible for all jobs on the incident until he or she delegates such duties to others. Therefore, when an MCI occurs within an area that is serviced by a small response team, such as in rural areas, the IC may initially be responsible for several positions.

During incident demobilization when tasks have been completed, personnel may no longer be needed. Therefore, resource re-assignment within the incident or resource demobilization may occur.

If the incident is multi-jurisdictional or if the incident has multi-disciplinary considerations, a unified command structure may be employed following the NIMS-ICS model.

1. Assume Command

The first emergency response unit on scene assumes command using the following format or according to its agency's protocol. It will perform a scene size up and report the following conditions:

- a. State the location of the incident
- b. Describe the type of incident (traffic crash, fire, plane crash, explosion, hazmat, etc.)
- c. Assume command and name incident
- d. Designate best access or a staging area.
- e. Assign an on scene tactical channel
- f. Report critical hazards of the scene

i.e. "FireCom 3114 is on scene, we have an explosion and hazmat release at the Phillips plant. 3114 will be Phillips command. All units stage at the corner of Main and Commercial streets. On scene units switch to tactical channel 3." ...

"All units from Phillips Command, be advised there is a chemical cloud moving to the South of the plant approach from the North"

2. Declare an MCI

Definition: More than five critical patients or more than 10 total patients that will be transported for treatment

- a. To activate this plan, the IC must declare the incident an MCI.
- b. Report the estimated number of patients, including as much detail as possible.
- c. Request additional resources needed.

i.e. "FireCom from Phillips Command I am declaring this incident an MCI. We have about 15 patients including 5 or 6 critical. I would like a second alarm medical"

- d. Declaring an MCI automatically implies the following will occur:
 - i. All personnel, responding and on scene, will operate under MCI patient care protocols, including suspension of CPR and use of START Triage.
 - ii. Transporting ambulances not involved in the MCI perform shorter MEDNET radio reports.
 - iii. Non licensed transportation modes such as mass transit may be used to transport patients.
 - iv. Transporting ground ambulances are assigned to the MCI to make round trips from the scene to hospitals or designated alternate care sites until released by the IC,
- v. The dispatch center notifies the nearest hospital's Emergency Department of the initial estimated patient numbers, and notifies air medical ambulances.
- vi. On scene physicians may not automatically assume positions within the ICS. Their position must be assigned.
- vii. In extraordinary circumstances, direct orders from an on scene physician who is caring for a patient may supersede these protocols on a patient by patient basis.
- viii. On scene nurses and other medically trained personnel not covered under these Standing Orders must act under their own orders.
- ix. A patient's Triage Tag is considered a sufficient pre-hospital care report form until a follow up prehospital report can be written.
- x. Patients may be entered into the Oregon State Trauma System and issued a trauma system identification band in the MCI pre-hospital setting. However the usual notification given to the receiving hospital of the trauma system entry is not required.

3. Establish Incident Facilities

- a. There will only be one Incident Command Post (ICP) per incident. It must be recognizable and a safe distance away from the hazard zone.
- b. A Staging Area or areas should be located where it best meets the incident traffic flow and will facilitate quick rotation.
- c. Alternate patient care sites may be established as needed. These sites may be predetermined by the hospital plan or set up as a temporary facility by the IC.

4. Manage transporting ambulances assigned to the MCI

- a. The transporting ambulance will report to the Staging Area. Any unit arriving on scene prior to the establishment of a staging area must receive assignment from the IC or their designee.
- b. The transporting ambulance will receive patients, and destination hospital assignment from the Transport Group Supervisor.
- c. After delivering their patient, all efforts shall be made to return to the MCI staging area in a serviceable condition creating a "Round Robin" system.
- d. The transporting ambulance crew should remain together and not get involved in the Treatment Area during their patient loading.
- e. The transporting ambulance will notify dispatch when they are on scene, enroute to the hospital, arriving at the hospital and when returning to the scene.

- f. The MEDNET report will consist of <u>only</u> the following items:
 - i. The transporting unit ID
 - ii. The number of patients and their respective triage codes
 - iii. The ETA to the receiving facility.

Overview of Position Duties

Duties of the IC until delegated:

- a. Determine the incident priorities and an Incident Action Plan (IAP)
- b. Determine the location of incident facilities
- c. Provide for the safety of the responders. A Safety Officer <u>MUST</u> be appointed if the MCI is considered a hazardous materials incident.
- d. Provide information to the public
- e. Provide coordination between assisting agencies
- f. Direct resources to complete the IAP
- g. Order resources
- h. Develop a plan for the next operational period
- i. Be responsive to additional incident needs.

Duties of Medical Branch Director

- a. Don vest. Radio call sign is "*incident name* Medical".
- b. Report directly to IC or the Operations Section Chief if one is assigned, and be responsible for Triage Treatment and Transport Group Supervisors
- c. Oversee all medical service delivery aspects of the IAP and coordinates with the any other appropriate ICS position.
- d. Contact hospitals with patient count and determine their ability to receive patients. Briefly discuss injuries to determine if specialists are available.
- e. Contact outlying hospitals and determine their ability to receive patients. Communicate this information to the Transport Group Supervisor.
- f. Ensure all Group Supervisors get the support they need to fulfill their responsibilities, and reassign or realign resources within the Medical Branch to facilitate the needs of the Medical Branch.
- g. Communicate and coordinate with their supervisor regarding their additional resource needs.

- h. Coordinate the setup of a Mass Care site.
- i. Coordinate with Transport Group Supervisor regarding the need for air medical transport and assign Landing Zone(s) (LZ) if needed.

Duties of Triage Group Supervisor

- a. Determine if incident dictates whether or not additional chemical or fire service PPE should be donned as patients may be involved in hazardous materials.
- b. Don vest. Radio call sign is "*incident name* Triage".
- c. Report directly to the IC or Operations Section Chief or the Medical Branch Director, whichever is the lowest position activated.
- d. This position is responsible for any crew assigned to them.
- e. Perform a primary scene search for victims, counting and sorting victims according to START criteria using the RED, YELLOW, GREEN or BLACK colored START triage categories. The use of either a standardized Triage Tag or a temporary colored ribbon system is appropriate during this initial triage.
- f. Communicate initial patient count to their supervisor including numbers within each category.
- g. Continually search the scene for additional patients to ensure no one is left behind or unnoticed. Update their immediate supervisor regarding patient numbers if additional patients are found.
- h. Triage criteria are used for setting priority when moving victims to the on-scene treatment area.
- i. Work closely with any rescue effort when determining the next priority patient to rescue.
- j. May need to triage patients prior to decontamination from hazardous materials. If this occurs, ensure all patients that enter the treatment area have been properly decontaminated.
- k. A final triage will be performed prior to the patient being received into the appropriate treatment area, and a standardized triage tag must replace any colored ribbon used during the initial triage.
- I. When completed, all patients will be triaged into RED, YELLOW, GREEN or BLACK categories. All Triage Tag stubs are forwarded to the Transport Group Supervisor.

Duties of Treatment Group Supervisor

- a. Don vest. Radio call sign is "*incident name* Treatment".
- b. Report directly to the Medical Branch Director and be responsible for anyone working in the Patient Treatment Area.
- c. Supervise treatment of on scene patients which may or may not include direct patient care.

- d. Designate location and provide supplies for RED, YELLOW and GREEN Treatment Areas. Provide enough room between the colored areas to avoid "blending", and provide enough room for patient service areas between each patient.
- e. Prioritize treatment effort according to RED, YELLOW or GREEN categories.
- f. Document as much as possible using the space provided on the triage tags. Include time, injuries and/or medical condition, actions taken, procedures and medications.
- g. Regularly update their Supervisor regarding specific numbers of patients in each triage category that are located in the Treatment Area.
- h. Communicate anytime a patient status changes to a different priority level.
- i. Coordinate with the Transportation Group Supervisor to determine

Duties of Transport Group Supervisor

- a. Don vest. Radio call sign is "*incident name* Transport".
- b. Report directly to the Medical Branch Director and be responsible for any crew assigned to them.
- *c.* Build a patient transport plan using the attached EMS Transportation Log which assigns a destination hospital to each patient leaving the scene.

NOTE: Information regarding the number of patients, the number of ambulances and bed availability should come from the Medical Branch Director if one is assigned.

- d. Designate an on scene traffic flow pattern from the Staging Area to Patient Loading Area and then departing the scene or to LZ.
- e. Log all patients transported from the scene using the Triage Tag serial number on the EMS Transportation Log.

Duties of Staging Area Manager

- a. Don vest if available. Radio call sign is "incident name Staging".
- b. Report directly to IC or if one is assigned, the Operations Section Chief and may be responsible for an assistant Staging Area Manager.
- c. Maintain a log of all available resources in the Staging Area.
- d. When directed, assign resources that are in the Staging Area to the proper location within the incident and provide information regarding their contact person and assignment.
- e. If needed appoint an assistant Staging Area Manager, who reports directly to the Staging Area Manager.
- f. Transporting ambulances may need to be marshaled into a separated portion of the staging area to facilitate quick rotation.

Duties for setting up Helicopter Landing Zone (LZ)

a. Person assigned to set up LZ must be familiar with helicopter operations.

- b. Landing area must be fairly level at about 8 degrees slope max.
- c. An area of 75 X 75 minimum must be chosen that is free of obstacles and clear of overhead wires etc.
- d. Establish LZ in a location that considers noise interference and rotor wash effect on the scene.
- e. Notify Medical Branch Director and Transport Group Supervisor of LZ location.
- f. Maintain close security on the LZ.

Conclusion of an MCI

Demobilizing an MCI

- a. Before releasing resources from the incident that have completed their task, any ICS position responsible for resources should consider re-assigning them to the Staging Area for possible re-assignment to active incident areas.
- b. At least one ambulance should remain on scene until all emergency operations have ceased as additional patients may be discovered or workers may be injured.
- c. The Medical Branch Director or Transport Group Supervisor shall notify all receiving hospitals, alternate care sites and assisting agencies when the transportation of last patient is complete.
- d. An on scene briefing of at least the medical branch should be done to determine what it will take to put resources back in service, sort out supplies and determine what will need to be replaced.
- e. With approval of the IC, the Public Information Officer (PIO) or Joint Information Center (JIC) should prepare a final press release.
- f. Any personnel on scene can request critical incident stress debriefing. This may be time sensitive and should be handled by a professional.

Post Incident

- a. The IC or their designee will perform a final patient audit and send a completed report to each transporting agency which list the patients transported by their ambulances.
- b. All agencies must complete pre-hospital patient care report forms on all patients transported by their agency.
- c. The IC or their designee should schedule an After Action Review of the incident within 3-5 days. Include all appropriate agencies that were involved: fire, EMS, law enforcement, dispatch, air ambulance(s), hospital(s) and others.

1.	FIRST UNIT ON SCENE	
	ESTABLISH COMMAND	
2.	REPORT TYPE OF INCIDENT	
3.	REPORT INCIDENT	
	LOCATION AND NAME	
4.	IDENTIFY ACCESS ROUTES	
	AND STAGING AREA	
5.	IDENTIFY ON SCENE	
	TACTICAL CHANNEL(S)	
6.	IDENTIFY ADDITIONAL OR	
	HIDDEN SCENE HAZARDS	
7.	DECLARE INCIDENT AN MCI	
8.	REPORT APPROXIMATE	
	NUMBER OF PATIENTS	
9.	REQUEST ADDITIONAL	
	RESOURCES NEEDED	

Staging

	Unit #	Туре	Time In	Time Out
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				

KLAMATH COUNTY FIRE DISTRICT NO. 1

EMS Transportation Log

Incident Location:							Inc	:. #:					ate:				
Total Triage Count:	Red	Yellow	<mark>/ Gree</mark>	n	Bla	ack						Res	spondin	ig Units			
	Sky	Lakes Cent	Medical er		R	RM	C			PN	имс		Ben	d		Redmo	nd
Number hospital can take >>>>>>>	Red	Yellow	Green	Red	Yello	<mark>w (</mark>	Green	Re	d	Yellow	v Green	Red	Yellow	Green	Red	Yellow	Green
Triage Tag #/ Patient Name	N	Unit umber	Depart Time	Hosp	oital	R	Y	G	A	ge	Sex			Inji	uries		
											M / F						
											M / F						
											M / F						
											M / F						
											M / F						
											M / F						

Sky Lakes (541) 882-6311 RRMC (541) 789-7100 PMMC (541) 732-5145 Bend (541) 382-4321 Redmond (541) 382-4321

Triage Tag #/ Patient Name	Unit Number	Depart Time	Hospital	R	Y	G	Age	Sex	Injuries
			•				U	M/F	· · · · · · · · · · · · · · · · · · ·
								M / F	
								M / F	
								M/F	
								M/F	
								M/F	
								M/F	
								M/F	
								M/F	
								M/F	
								M/F	
								M/F	
								M/F	
								M/F	

Sky Lakes (541) 882-6311 RRMC (541) 789-7100 PMMC (541) 732-5145 Bend (541) 382-4321 Redmond (541) 382-4321

Post-Incident Analysis Report

Date [.]	Dispatch Time ⁻
Bator	

Agencies Involved:

Hospitals Transported to:

Position Titles:

Position	Name	Position	Name
Incident Command		Finance/Admin Chief	
Safety Officer		Logistics Chief	
Information Officer		Medical Branch Dir.	
Liaison Officer		Triage Supervisor	
Operations Chief		Treatment Super.	
Planning Chief		Transport Supervisor	

Patient Count:

Green	Yellow	Red	Black	Total

Post-Incident Transporting Agency Patient Audit

	Tag Number	Priority Color	Time in Treatment	Time out	Receiving Hospital	Transport Unit	Transport Time
1.							
2.							
3.							
4							
-T.							
5.							
6.							
7.							
8.							
9.							
10.							
11.							
12.							
13.							
14.							
15.							
16.							
17.							
18.							
19.							
20.							

Glossary

Closed Incident:

A "Closed Incident" is an incident where access to victims is restricted, or where victims are within an enclosed area. All victims may not be accessible until some patients are moved or extricated.

Dynamic Incident

A "Dynamic Incident" is an incident where there is an increase in the number of patients, because the cause of the injuries is still present. Example: floating cloud of toxic fumes.

<u>Helispot</u>

Temporary location for landing helicopters which should be staffed with personnel equipped to secure the area.

<u>ICS</u>

The Incident Command System is a federally recognized standard incident management tool that uses common terminology, common position titles and common responsibilities and standardizes resources.

Mass Casualty Incident (MCI)

An MCI is any EMS incident involving more than five critical patients or more than ten total patients.

<u>NIMS</u>

The National Incident Management System is a detailed Federal plan for managing incidents that range from the small local to the nationally significant.

Open Incident:

An "Open Incident" is an incident where victims are all accessible for triage.

Patient Loading Area

An area set up near the Treatment Area for loading patients into transporting ambulances.

<u>START Triage</u> START stands for Simple Triage and Rapid Treatment, and it follows the matrix below:



Static Incident

A "Static Incident" is an incident where, after an accurate patient count has been made, the number of patients will not increase. This is because the cause of the injuries to the victims has passed. Example: MVA.

Treatment Area

An area set up to facilitate on scene treatment of patients while they wait for transport to a receiving hospital.

<u>Triage</u>

To sort victims or patients into four categories, and assign them a priority based on severity of injuries.

<u>Triage Tag</u>

The county-accepted triage tag as determined by the Ambulance Advisory Committee is a serial numbered multi-part tag used to identify triage categories and track specific patients during an MCI.

As personnel reach their maximum span of control ICS positions are appointed to manage people and procedures. Additional positions not listed may be appointed as necessary to deal with the incident. Please follow NIMS/ICS when assigning additional positions.





COVID-19 Pandemic

Patient Management

Section F

COVID-19 Patient Management: Purpose

This advisory is an overlay to existing patient care protocols and applies to the management of patients diagnosed with or suspected of having COVID-19 or an influenza like illness based on dispatch information, patient location/context (care facility, etc.), ongoing outbreak epidemiology, and provider obtained history, judgment and other information.

Procedure

High Risk Patients, Procedure Questions and Situational Awareness

- 1. Does the patient have a fever, cough, or respiratory distress?
- 2. Is the patient or facility suspected to have COVID-19?
- 3. Has the patient had prior contact with a known COVID-19 patient?
- 4. Could the patient require aerosol-generating procedures?

If the answer is "yes" to any of the above questions, the patient is a high-risk patient and is a potential COVID-19 patient. Considerations for PPE, treatment and procedure modifications should be made as indicated below. If the patient is from a high-risk facility (Assisted Care, Adult Foster Home, Nursing home, Clinic, Jail), you should have a heightened sense of situational awareness.

SYMPTOMS	SIGNS
1. *Fever (observed or reported)*	1. Tachypnea (RR > 24/min)
2. *Shortness of breath*	2. Tachycardia (HR > 100/min)
3. *Cough*	3. Hypoxia (SpO ₂ < 94%)
4. URI symptoms with sore throat, rhinorrhea	4. Hypotension (MAP < 65mmHg or SPB < 90 mmHg)
5. Chest pain	
6. Confusion	
7. Headache	
8. Fatigue/Myalgia (muscle aches)	
9. Anorexia	
10. Nausea, vomiting, diarrhea	
Primary symptoms	

A. Universal Patient Care

HIGH-RISK AEROSOLIZING PROCEDURES	HIGH-RISK PPE REQUIREMENTS (required for all those within 6 feet of the patient)
Bag-Valve-Mask Ventilation	Gloves
Endotracheal Intubation	Eye Protection
Supraglottic Airway Placement	Highest Available Respiratory Protection
Nasal and Oral Airway Placement	Gown
Non-Invasive Positive Pressure Ventilation	
Nebulized Treatments	
Suctioning	

- 1. Wear appropriate PPE for the appropriate patient and situation.
- 2. Review information provided by dispatch and request additional information from dispatch as needed.
- 3. Question the patient about a history of recent travel or contact with a known COVID-19 patient.
- 4. If possible, consider using reporting party phone number to communicate and obtain more information before entering a scene.
- 5. If possible, establish communication with the patient, family member(s) or caretaker(s), while maintaining at least 6 feet of distance.
- 6. If possible, have the patient move to an open area.
- 7. Equipment and bags (including drug boxes) should be kept >6 feet (or as far away from) the patient as possible.
- 8. Ensure proper provider donning/doffing for high-risk encounters/procedures.
- 9. EMS provider in charge should ensure or designate the role to an on-scene provider, that personnel are maintaining proper PPE and distancing themselves as much as possible from patient. If possible, personnel should stay out of the same room as the patient, if not actively providing hands-on care.
- 10. If possible, at a minimum, for patients with cough, shortness of breath, or fever, a simple surgical/medical mask should be given to the patient to wear over their mouth and nose.
- 11. When possible and safe, limit the number of personnel exposed to any known or potentially COVID-19 infected person. If safe for patient care, one provider should initially assess a patient.
- 12. When entering a care facility, including adult foster care homes, with known COVID-19 patients, consider the facility to be a high-risk area for both providers and patients and personnel exposure should be limited as feasible. Appropriate PPE should be worn inside the facility. EMS personnel are encouraged to ask facility staff to bring patients (wearing a simple mask) to a central area near the facility entrance for initial EMS evaluation.

- B. <u>PPE</u>
 - 1. For patient encounters with known or suspected COVID-19 infection, minimum PPE will include gloves, eye protection, and mask. Consider gown or coveralls if in physical contact with patient.
 - 2. If high-risk aerosolizing procedures are being performed, airborne-precautions and PPE must be used. This means, the above PPE with the addition of gowns and N95 or higher respiratory protection.

C. Patient Transport Instructions

- 1. Contact the receiving facility as soon as possible and advise them that you have a patient needing isolation. Do not enter the ED or other patient care area until directed by the ED staff. This may include alternate locations within the facility such as temporary shelters and treatment areas.
- 2. Family members and contacts of patients with possible COVID-19 shall not ride in the transport vehicle except for pediatric patients or other vulnerable or special needs patients.
- 3. Isolate the driver from the patient compartment if possible; if unable, the driver should wear appropriate mask and eye protection.
- 4. During transport, open the outside air vents in the driver area and turn on the ventilation fans to the highest setting.

Treatment

- A. Cardiac Arrest
 - 1. All cardiac arrest patients are high-risk and high-risk PPE should be worn.
 - 2. See airway management instructions and ETI guidance.
- B. Respiratory Distress Protocol
 - 1. Airborne precautions (high-risk PPE) are needed for any aerosol generating procedures as defined previously.
 - 2. If using a nasal cannula or NRB, a simple mask should be applied over for this equipment on a patient's face if possible.
 - 3. All personnel in the room with a patient receiving any high-risk procedures should use appropriate high-level PPE before treatment is initiated.
 - 4. Nebulized meds should be used as a last resort consider other appropriate treatments first. A patient with severe respiratory distress and wheezing can still receive nebulized treatments. Perform treatments on scene and outside if possible. Nebulizer treatments should not be performed during transport.
 - 5. Instead of nebulized treatments for asthma, consider Epinephrine (0.3mg 0.5 mg Epi 1:1000 IM every 5 minutes, repeated once). This applies for patients age 40 and younger without underlying heart disease (pervious MI, uncontrolled hypertension, etc.). For patients over 40 or with underlying heart disease, don high risk PPE and perform nebulizer treatment in open area prior to transport.
 - 6. If available, use an albuterol Metered Dose Inhaler (MDI) in lieu of nebulizer treatments. If patient has their own MDI, consider bringing it with you for use in route. 4 puffs of an albuterol MDI is equivalent to 1 nebulized treatment; if available, use a spacer.
 - 7. Avoid steroid administration in suspected COVID-19 patients.
 - 8. BVMs should be equipped with Viral/HEPA filters, as available.

- 9. Maximize area ventilation during these procedures as able: open doors, use exhaust fans, etc.
- C. General Airway Management
 - 1. The most experienced provider should assume control of airway management in known or suspected COVID-19 patients.
 - 2. The use of supraglottic airways is considered a continuously aerosolizing procedure.
- D. Non-Invasive Positive Pressure Ventilation (CPAP/BiPaP)
 - 1. This is an aerosolizing procedure and should be considered when performing advanced airway management and donning appropriate PPE. Attempt to minimize the performance of this procedure to only when necessary for respiratory distress.
 - 2. **DO NOT** discontinue CPAP/BiPaP upon entering the ED.
- E. Advanced Airway Management
 - 1. If a patient responds to supplemental oxygen with SpO₂ levels above 90% (and can maintain adequate airway) defer advanced airway management and notify the hospital of a potential need for airway management upon arrival.
 - 2. If advanced airway management is needed in a possible COVID-19 patient, the most experienced provider on-scene is encouraged to be the person in charge of the airway.
 - 3. Preferred pre-oxygenation method is with a BVM with proper facemask-seal with viral/HEPA filter.
 - 4. Do not squeeze BVM bag before intubation attempt. Hold facemask with good two-handed technique until initiating advanced airway attempt to maximize recruitment of alveoli. Set PEEP to 5-10 cm H₂O if equipped.
 - 5. Ensure viral/HEPA filter is attached to BVM before intubation attempt, if available.
 - 6. Intubation with video laryngoscopy (VL) and bougie is strongly preferred over direct laryngoscopy (DL). This is to maximize the distance from patient and limit exposure.
 - 7. Endotracheal intubation is preferred over SGA.
 - 8. After intubation, make sure that you have the viral/HEPA filter in place on the BVM, as able, to attach to the tube. <u>Inflate the cuff before bagging the patient</u>.
 - 9. Confirm tube placement using standard verification methods, including EtCO₂ waveform capnography.
- F. Suctioning
 - 1. Suctioning is a high-risk aerosolizing procedure. Use appropriate PPE.